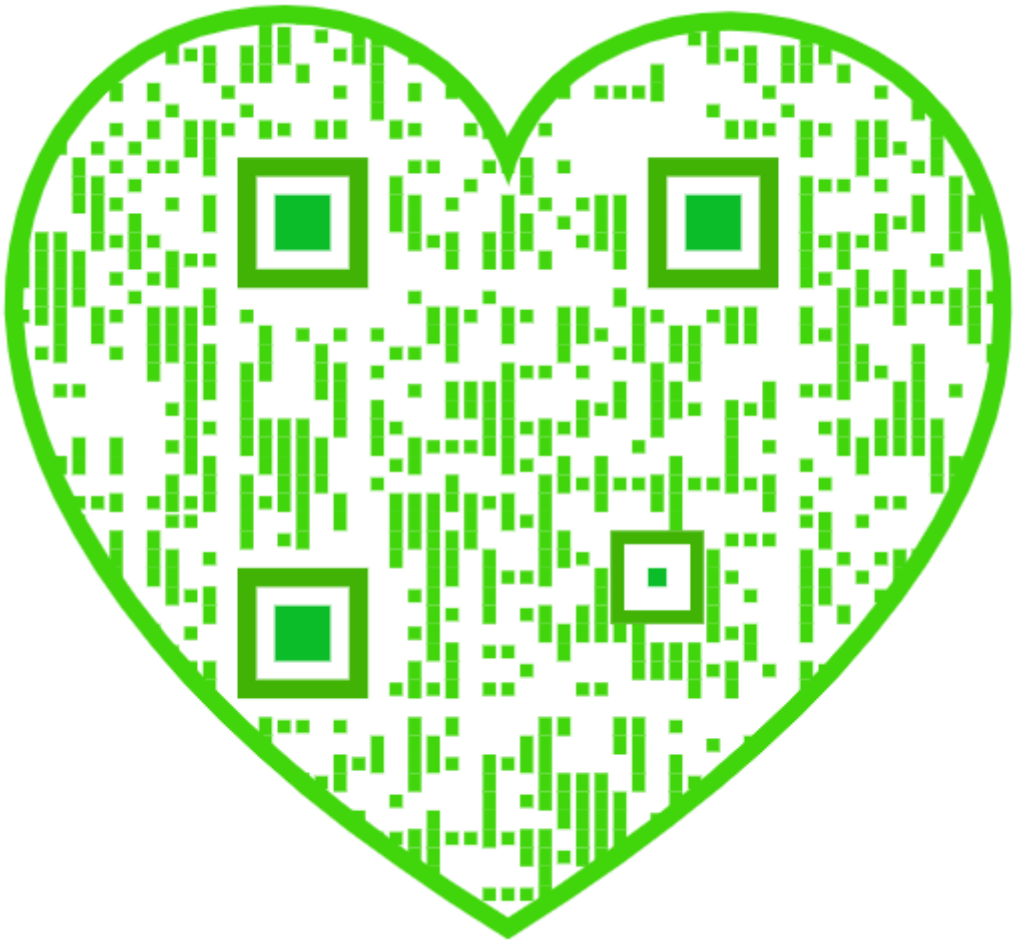
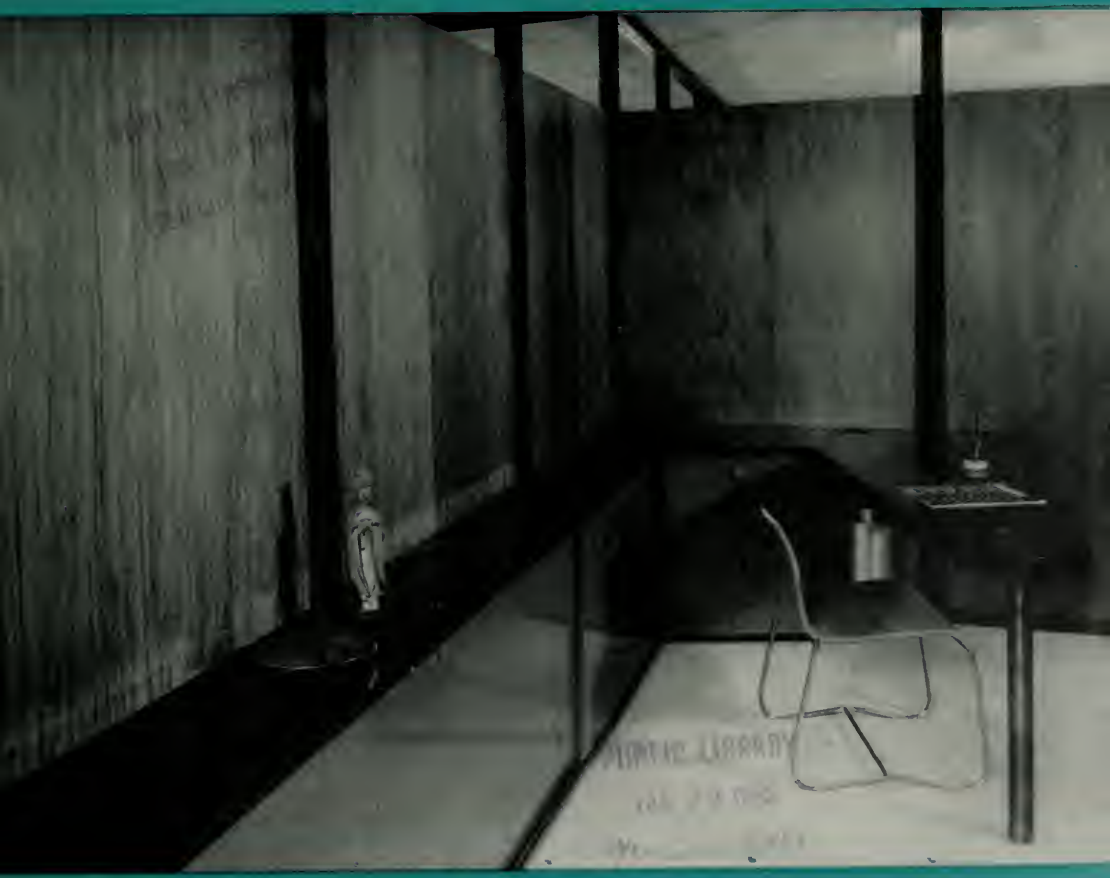


ARCHITECT AND ENGINEER

MODERN INTERIORS



DESIGNED BY KLAUS PFEFFER

JANUARY 1955

THE NEW EQUITABLE BUILDING
in San Francisco is scheduled
for completion in May of this year.

Architects: W. D. Peugh, and successors Loubet & Glynn
Consulting Architect: Irwin Clavan, New York
Structural Engineers: F. W. Kellberg. Foundation Engineer: Charles H. Lee
General Contractor: Dinwiddie Construction Co.
Steel Erection: Consolidated Western Steel Division

25 Stories Up... and 133 Feet Down!

To provide a firm foundation for the new 25-story Equitable Building required 446 H-Beam Bearing Piles (14 in., 102 lb.) driven to refusal in hard rock at depths ranging from 107 to 133 feet below basement level. Piles were designed for an allowable load of 135 tons. Construction on the new building also features high-strength steel bolts instead of rivets. And in addition to the 3300 tons of piling, 5300 tons of structural and 50 tons of stainless exterior facing are used. It takes steel to change a skyline... and all of this steel came from the mills of United States Steel.

USS Products for Heavy Construction

United States Steel Corporation · Columbia-Geneva Steel Division

UNITED STATES STEEL

Vol. 200 No. 1

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Book Reviews

ERNEST McAVOY
Advertising Manager

★

COVER PICTURE

MODERN
INTERIOR
DESIGN
By Klaus Pfeffer,
Berkeley, California

Attention of the world is being focused on California and the West Coast, where great progress is being made in modern, creative, design. Some outstanding examples of today's modern design is the work of Klaus Pfeffer of Berkeley, California. See page 7 for complete details.

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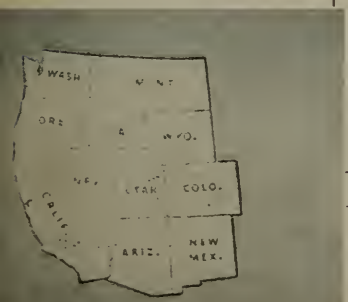

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. EDITORIAL NOTES .

HOUSING BOOM

How long can the housing boom last?

Forecasters can give you an easy answer in double talk—some say the end is clearly in sight, others are equally certain today's accelerated home building program will continue in the forseeable future.

One factor is certain. Formation of families determines the demand for housing on a realistic basis, and the current high birthrate is causing many families who bought small houses since the war to expand them or buy larger ones.

Separation of doubled-up family units continues, and higher incomes give earlier independence to young couples. The long established policy of Americans to "shift" with industry expansion places an added burden upon housing facilities in certain areas of the nation and thereby increases the need for adequate housing.

Other factors which contribute to a continuing need for new houses is a wider distribution of income, comparatively easy credit, and the new federal Housing Act.

720.5
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720310

* *

More than 7,250,000 homeowners are using oil as a fuel in central heating systems. and another 9,000,000 use oil in space heaters.

* *

ATOMIC ENERGY PROGRAM

You may, or may not, have read considerable opinion on the government's new atomic energy program, and depending upon the source of such material is the amount of emphasis placed upon the argument of Government vs. Private Industry position in the situation.

Advocates of bigger, better and more government control of every social phase of our life contend the program is a "giveaway" to private interests, while there are some who feel private industry is inadequate in its ability to develop the potentialities of the Atomic Age.

Four important facts of the Atomic Energy Act of 1954 should be remembered in any consideration of the situation:

1. The act does not give atomic plants to private companies. On the contrary, it reaffirms the national government's title to its existing atomic energy plants.

2. The act does not give uranium or other atomic materials to private companies. The companies must pay the government for any atomic materials which they secure from government-owned plants. The act merely increases slightly the range of such materials which private industry can use for civilian purposes.

3. The act will not permit "profiteering" on atomic patents. It forbids the exclusive use of patents accorded inventors in other fields. Instead, it provides compulsory licensing of patents to competitors over the next five years.

4. The act will not prevent the use of atomic energy for the "public good".

The economic development of the United States is the result of competition among men free to set their own goals.

* *

The future of free enterprise in the United States could well depend on the amount of education possessed by citizens.

* *

NO STREET TAXES

How to pave streets without tax levies is a story from Bartlesville, Oklahoma.

In 1951 the main downtown streets of the city were in acute need of resurfacing. Through the cooperation of local oil companies, a hotel and a bank, two blocks were resurfaced with asphaltic concrete as a demonstration project.

Two years later the Bartlesville chamber of commerce raised $60,000 from the property owners by a voluntary subscription to complete the project. The streets then were resurfaced with no taxes to pay and no bonded debt incurred.

Local initiative is doing hundreds of jobs throughout the country without waiting for government help.

Let us have your story.

* *

When government has a major interest or control in an industry, it is generally on a monopolistic basis and labor and management must give up many of their rights.

* *

A GOOD ARCHITECT

Today's Architect is pioneering in a profession dedicated to better living. He is free from regulations of Classic and Gothic, modes copies for hundreds of years. He has come to a clear conclusion: for an architectural form to have lasting appeal it should make the fullest and best natural use of its materials.

His work in designing homes, airports, terminals, shopping centers, schools and similar types of modern building reflects today's dynamic architecture as it deals with the living, flow of traffic, and requirements of a people on-the-go.

The Architect, through a job well done, every day shows the graces of a well-designed, practical building. And he is shouldering a full moral responsibility for building new cities measured in progress.

WOODWORK INSTITUTE of CALIFORNIA

How Cooperation Within One Industry Is Paying Dividends To All Building Interests

In the late fall of 1950 a small group of millmen were gathered around a luncheon table in San Francisco, earnestly discussing the overall picture of California's millwork industry. Statistics were carefully gone over which not only reflected the tremendous increase in all types of buildings in California during the past ten years, but they also indicated that this growth would continue for, at least, another ten years, maybe longer. The added problems, duties and responsibilities that all this had placed upon the millwork industry is what concerned these men most. Nothing escaped their deliberations. They remained in session through the dinner hour and way into the night. When the meeting broke up, it was agreed that the following facets of the picture stood out, crystal clear:

ROBERT HOGAN
President

(1) Inasmuch that furnishing the proper kind and quality of millwork is an essential feature of a building, the millwork industry faces a big opportunity and, at the same time, a big challenge. (2) Wood in millwork products has suffered an alarming loss in business to substitute materials. (3) For lack of good standards of workmanship and materials, plus unwise competition among millmen, the entire industry had lost considerable goodwill. (4) Both the millwork industry and the architectural profession have drifted farther apart, over the year, in their perspective of their mutual problems and interests. (5) A perturbing amount of misunderstanding seemed to exist among many groups in the building field, as to what constitutes millwork, where it begins and where it ends. (6) The logical solution to these industry-wide problems can best be accomplished through cooperative effort on the part of those who comprise the millwork industry.

Consequently, it was agreed that a large, organizational meeting should be held as quickly as possible to which the entire industry would be invited. Such a meeting was held at the Palace Hotel in San Francisco January 19th, 1951, attended by some forty-five millmen, representing manufacturers, jobbers and cabinet makers. The result was the creation of a state-wide, non-profit corporation known as The Woodwork Institute of California.

On this occasion, the firms present, voluntarily subscribde $31,200.00 to underwrite the financial success of the organization during its critical first years of formation. Mr. Larue Woodson was elected as W.I.C. first President, an office he served with much credit for two years. Mr. Russell Bjorn was offered the task as Manager and given the responsibility of "putting the pieces together." Starting from scratch the membership, as of January 1, 1955, has passed the 100 mark. It is the only business mens association, of similar type in California, that is statewide. The Board of Directors consist of fifteen, with representation from San Diego in the south and up through the coast and valley to Sacramento. They meet quarterly, holding such meetings in different parts of the state. Two general meetings are held annually, one in the south and one in the north. Annual Conventions are also divided between the north and south. The 1955 Convention will be January 13-14, Palace Hotel in San Francisco, with President Robert Hogan presiding. The Staff consists of Manager-Director Russell Bjorn, Secretary Mary Yonemoto and Leslie Harter, Technical Consultant. The latter spends his entire time in the field contacting architects, builders, millmen and public officials doing a two-fold job: service and selling.

RUSSELL BJORN
Manager-Director

The aims and purposes of W.I.C. as stated in the By-laws and Articles of Incorporation, in a few words, are, "to promote the further use of wood in millwork in all types of building construction." To carry out this program the Directors established at the outset, as policy, that all that W.I.C. does in its programming and activities must be along constructive and positive

(See page 32)

EDITOR'S NOTE: This is the first of a series of articles on the Woodwork Institute of California, published to show the individual cooperation developing within the construction industry to assure complete advantage of newest techniques, materials, and scientific know-how to the greatly expanding building programs throughout the West. Subsequent articles will deal with specific problems, their solution, and newest developments of the woodwork industry.

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, will offer the following exhibitions and special events for January:

Exhibits: Art in Science, original cover paintings for Scientific American; Gouache Paintings, by H. R. H. Prince Eugen of Sweden, 1865-1947; Fifty Prints by California Artists; Contemporary Ethiopian Paintings; and Thonet Furniture.

Events: Classes in Art Enjoyment for Adults will include Modes of Representation (Conducted by Charles Lindstrom); Seminars in the History of Art; Painting Workshop; and for the Children, classes in Picture Making, Art and Nature and the Art Club are scheduled.

The Museum is open daily 10 a.m. to 5 p.m. No admission charge.

CITY OF PARIS

The Rotenda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an exhibition of Handwoven Textiles together with French, English, Italian and Pacific Coast Lithographs and Silk Screen Prints during the month of February.

A special group of Watercolors by Alexandra Bradshaw will be shown in the Little Gallery at the same time.

KATE NEAL KINLEY MEMORIAL FELLOWSHIP

By authority of the Board of Trustees of the University of Illinois the Committee in charge has announced the twenty-fourth annual consideration of candidates for the Kate Neal Kinley Memorial Fellowship.

The Fellowship, established in 1931 by the late President-Emeritus David Kinley in memory of his wife and in recognition of her influence in promoting the Fine Arts, yields the sum of one thousand three hundred dollars which is to be used by the recipient toward defraying expenses of advanced study of the Fine Arts in America and abroad.

The award is open to graduates of the College of Fine and Applied Arts of the University of Illinois and to graduates of similar institutions of equal educational standing whose principal or major studies have been in one of the following: Music, Art or Architecture.

Applications should be made to Dean Allen S. Weller, College of Fine and Applied Arts, Room 110, Architecture Building, University of Illinois, Urbana, Illinois, not later than May 15, 1955.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace McCann Morley, has arranged a program of special exhibitions and events for January, which include the following:

Exhibits: 20th Anniversary Exhibitions, presenting a large number of selections from the Museum and its collections; Collections of Modern Art in the Bay Area; and a continuation of the exhibition of Younger European Painters.

Events: Concerts and Lecture Tours and Wednesday Evening Discussions on various subjects of art. Museum activities include Adventures in Drawing and Painting, Art Studio for the Layman, and Children's Art Classes each Saturday morning.

Museum hours are Monday, 12-5; Tuesday through Saturday, 12-10 p.m.; and Sunday's and Holiday's 1-5 p.m.

SAN FRANCISCO MUSEUM OBSERVES ITS 20th ANNIVERSARY

A gala group of exhibitions will honor the 20th Anniversary of the San Francisco Museum of Art.

Originally located in the Palace of Fine Arts, site of the Panama-Pacific Exposition of 1915, the Museum moved into its present location in the War Memorial Building in 1935, and gradually through the past 20 years the Museum has evolved a program which includes exhibiting and collecting contemporary art and serving as a center for the cultural life of the community.

BRAYTON WILBUR ANNOUNCES GIFTS FOR MUSEUM OF ART

Brayton Wilbur, President of the San Francisco Museum of Art, announced a number of gifts of works of art to the Museum in honor of its 20th anniversary.

The new acquisitions are being shown for the first time, as are a number of other gifts presented during the past year, in the Anniversary Exhibition currently being seen at the Museum in the War Memorial Building in San Francisco.

BARRY EVANS PHOTO

FOUR MODERN INTERIORS

designed by

Klaus Pfeffer

JANUARY, 1955

FTER ↑
EFORE ↓

AN ILLUSION OF SPACE AND DEPTH WAS CREATED IN THESE TWO BLANK WALLS BY SETTING RECTANGLES OF MIRROR ABOVE PANELS OF REDWOOD PLYWOOD IN BLACK LACQUERED FRAMES, THEREBY LEADING THE EYE TOWARD LIMITLESS DISTANCES FAR BEYOND THE CONFINES OF THE ROOM.

BARRY EVANS PHOTOS
COURTESY OF
THE AMERICAN HOME

REMODELLED STUDY

FOR DR. DONALD A. MACFARLANE
BERKELEY, CALIFORNIA

AFTER ↑

BEFORE ↓

MACFARLANE STUDY LOOKING TOWARD GARDEN COURT. STRING AND COPPER CHAIRS CUSTOM MADE BY BON AND VAZA MARTIN.

ALL CABINET WORK
BY
MERRILL BECKWITH

BEACH COTTAGE

FOR MR. AND MRS. HERBERT WILLIAMS
SAN RAFAEL, CALIFORNIA

INTERIORS BY KLAUS PFEFFER AND ASSOCIATE PEARL BANK STEWARD
ALL CUSTOM MADE FURNITURE BY BON AND VAZA MARTIN

ERNEST BRAUN
PHOTOS

REMODELLED LIVING ROOM

FOR MR. AND MRS. ROBERT S. JOHNSON
BERKELEY, CALIFORNIA

INTERIORS BY KLAUS PFEFFER AND ASSOCIATE PEARL BANK STEWARD

ERNEST BRAUN PHOTOS
COURTESY OF
THE AMERICAN HOME

BEFORE →

HIGH FIDELITY RADIO AND PHONOGRAPH INSTALLATION PLACES RECORD PLAYER AND TUNER CONVENIENTLY BESIDE SOFA AND LOUDSPEAKER ACROSS THE ROOM FOR BEST SOUND.

ALL CUSTOM MADE LAMPS AND FURNITURE
BY BON AND MAZA MARTIN

VIEW OF DINING AREA
IN ROBERT JOHNSON HOME

↑ AFTER

↓ BEFORE

ALL CABINET WORK
by
A. J. YERRICK

ALL FABRICS
from
EMILY THOMPSON

ARRY EVANS PHOTO, COURTESY OF SUNSET

REMODELLED LIVING ROOM

OR DR. AND MRS. ROBERT D. BRIGHT
ERKELEY, CALIFORNIA

NTERIORS BY KLAUS PFEFFER AND ASSOCIATE PEARL BANK STEWARD

LAMPS MADE OF COMMON SEWER PIPE SERVE AS DRAMATIC ACCENTS AT EACH END OF THE LONG BUILT-IN SOFA UNIT. THE TEA CHEST PAPER ON THEIR SHADES IS REPEATED UNDER THE GLASS TOP OF THE COFFEE TABLE.

ERNEST BRAUN PHOTO, COURTESY SUNSET

DESIGN is "Brilliant, Daring, and Original."

ARCHITECTURAL COMPETITION AWARD

OLYMPIC GAMES 1956

SWIMMING POOL

MELBOURNE, AUSTRALIA

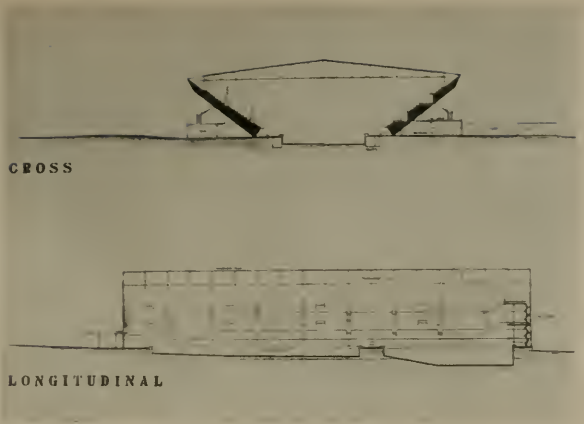
By JOHN LOUGHLIN

An Australian-wide contest to select the architects for the Melbourne 1956 Olympic Games pool has brought to light a revolutionary winning design.

It was submitted among 72 entries by a group of four young Melbourne architects and an engineer who graduated together from the University of Melbourne in 1949.

They are John Murphy and his wife, Phyllis, who are in practice together; Peter McIntyre and Kevin Borland, also practicing together, and William Irwin, who collaborated with the structural engineering.

WINNERS: Arthur W. Coles congratulates the winning team: John Murphy (left), Peter McIntyre, William Irwin (collaborating engineer), K. Borland and Mrs. Phyllis Murphy.



OLYMPIC GAMES—1956
Swimming Pool
Sections

Their reward is the architectural commission for the pool.

Costing a maximum of $784,000, the pool will be built on the Fawkner Park, near the corner of St. Kilda Road and Toorak Road, about a mile from the center of the city. It will seat just over 6,000.

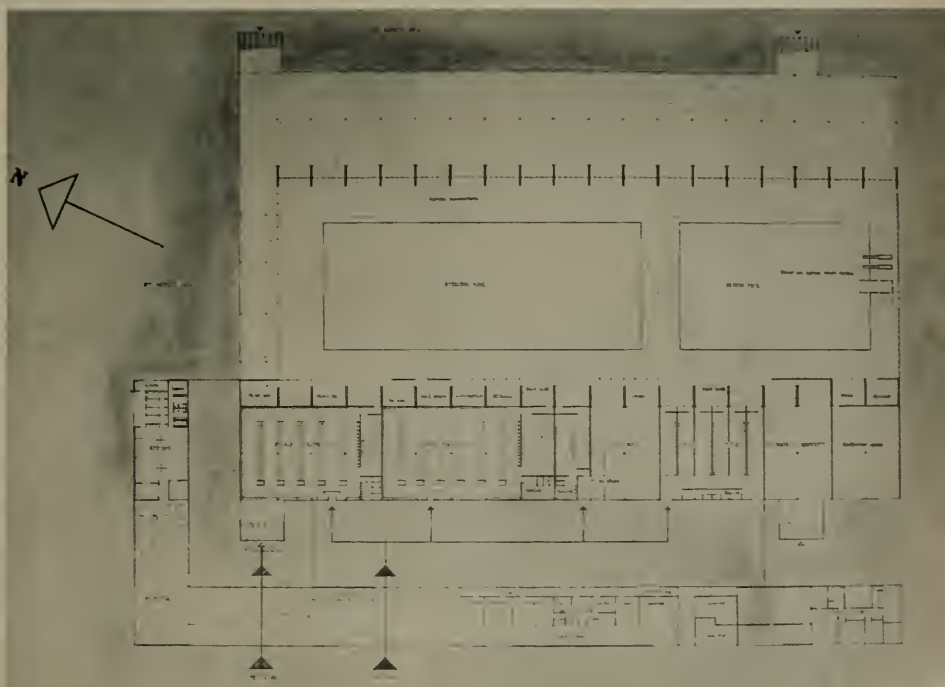
The chosen design gains its unconventional appearance from the fact that it consists of only two components—the sloping tiers of seating on opposite sides of the pool, and the roofing. It is like a conventional structure with the walls and supports knocked away, leaving the girders that carry the seating jutting outwards with no apparent support.

Ultra-modern style was not the aim of the architects. The final form, they explained, was incidental, resulting from close collaboration with the structural engineer to meet the contest's requirements of economy and utility.

The building will be 60 ft. high, 340 ft. long, and 220 ft. wide, with a ground floor area of 68,908 sq. ft. The seating area will be 32,832 sq. ft.

A regulation Olympic pool of 50 metres by 20 metres will have a false end to be removed after the games to leave a pool 55 yards long for Australian swimming distances. The separate diving pool will

(See page 35)



GROUND PLAN OLYMPIC POO

Fig. 1—Aluminum Falsework Truss Being Towed Into Position.

ALUMINUM FALSEWORK

IS USED ON THE

Richmond-San Rafael Bridge

SAN PABLO BAY, CALIFORNIA

By FRANCIS J. MURPHY, C.E.*

A contract in the amount of approximately $25,000,000.00 for the construction of the superstructure of the Richmond-San Rafael Bridge was recently awarded to Judson Pacific Murphy-Kiewit, a Joint-Venture consisting of the Judson Pacific Murphy Corporation of Emeryville, California; Peter Kiewit Sons' Company of Omaha, Nebraska; Stolte, Inc., of Oakland, California, and the Fred J. Early Company of San Francisco.

This job is the largest bridge under construction in the world today and, when completed, will be the second longest over-water bridge in the world; the longest being the San Francisco-Oakland Bay Bridge, and the third longest being the recently completed Chesapeake Bay Bridge.

There are many new developments being used by the contractors in the construction of this job. One of the most noteworthy, and the one we shall dwell upon in this article, is the use of structual aluminum for falsework. It is believed that this is the first such

*NOTE: Francis J. Murphy received his B.S. in Civil Engineering at the University of Santa Clara. He is an associate member of the ASCE and project manager on the superstructure contract of the Richmond-San Rafael Bridge. A registered engineer in the State of California, Mr. Murphy has been employed by the Judson Pacific-Murphy Corporation since its formation in 1945.

use of aluminum in construction history.

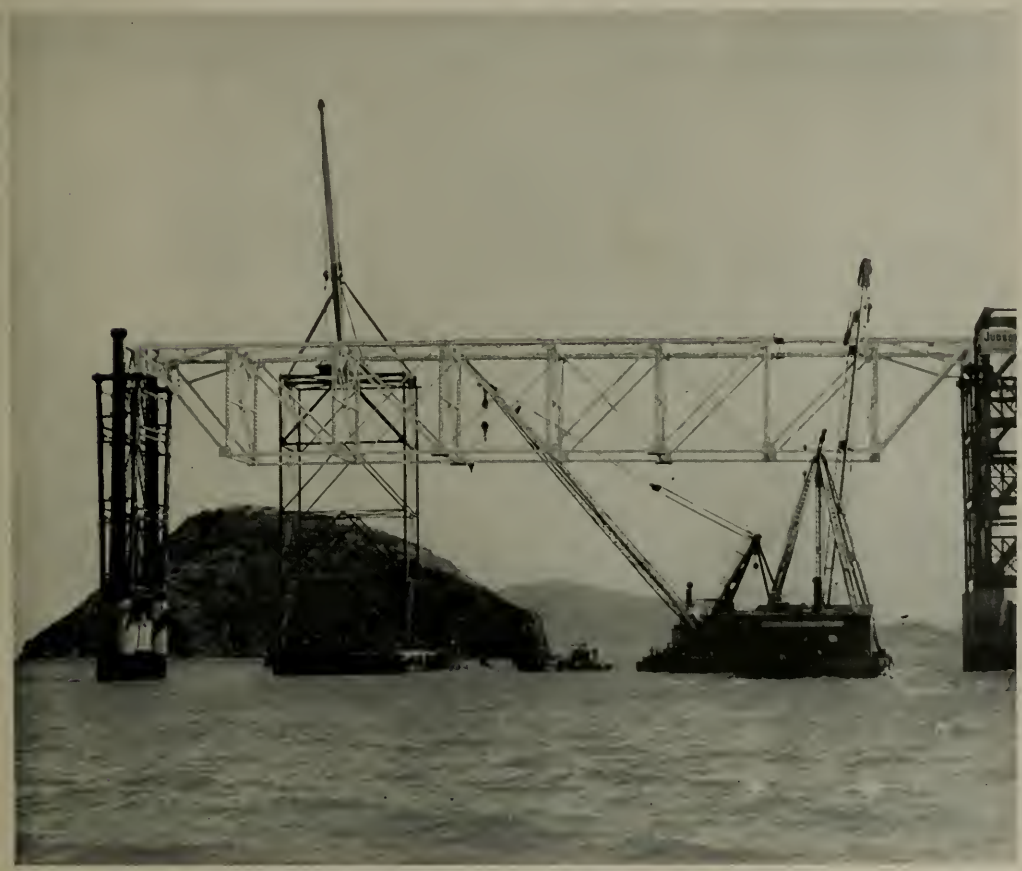
The job is composed of thirty six 100-foot girder spans, two cantilever spans, and thirty six 289-foot truss spans. The aluminum falsework will be used for the erection of twenty eight of the thirty six 289-foot spans. The remaining eight 289-foot truss spans will be floated into place in one piece because they are so low the use of aluminum is not necessary.

The aluminum span as shown in Figure #1 was fabricated in Judson Pacific-Murphy Corporation's plant in Emeryville and riveted and assembled by joint venture personnel at their Richmond yard. It was then raised by two conventional derrick barges onto two Army surplus BK barges and floated out to the jobsite. It was then raised into position between towers as shown in figure #2 by using the two derrick barges mentioned above. The aluminum is supported by vertical wooden piling attached to the existing steel towers and, after erection, forms a falsework platform. It will support the individual members of the truss span until the span is finally swung into place and literally becomes a bridge.

The first chord section is being placed on the aluminum falsework in figure #3. On some of the spans that are higher, the individual truss sections are hoisted into place by use of a double boom traveler that was designed and fabricated for this specific job.

Figure #4 shows the first truss span erected by use of aluminum falsework nearing completion. The aluminum spans cost $150,000 each, and are one of the largest applications of structural aluminum in

Fig. 2—Aluminum Falsework Truss Raised Into Position and Ready for Steel Erection.



history. The only larger applications, tonnage-wise, are the arc-type bridge in Canada and the Alcoa Building in Pittsburgh.

Channels up to twelve inches, plate up to three-quarters of an inch, and angles to five-eighths of an inch were rolled at Alcoa's Massena, New York, mill and constituted 90% of the tonnage. The largest individual sections of the aluminum truss built up on plates and angles have a cross section of 27¾" x 19". The heavy sections and long lengths required the limits of the Massena mill, one of the largest aluminum mills in the world.

Steel rivets were used in the aluminum assembly since steel rivets were more readily available and easier to install. The major reasons for using aluminum are:

1. It will eliminate the use of conventional false work piling for the twenty six spans which, due to the location of the bridge and because of the deep water and deep deposits of mud (down to minus 200 feet in some places) would prove extremely expensive.

2. If the contractors elected to float all of the spans into place by using aluminum, it would eliminate the problem of floating spans, weighing upwards of 400 tons, 150 feet in the air in the heavy tides of upper San Francisco Bay.

3. The aluminum span is covered with a safety net, and the contractors believe that this is by far the safest method of bridge construction ever devised. A complete aluminum falsework span weighs only 120 tons and measures 285 feet long by 36 feet wide by 42 feet deep.

Fig. 3—Erecting First Piece of Steel Upon Aluminum Folsework Truss.
(Aerial Photo by Fred H. Anthon)

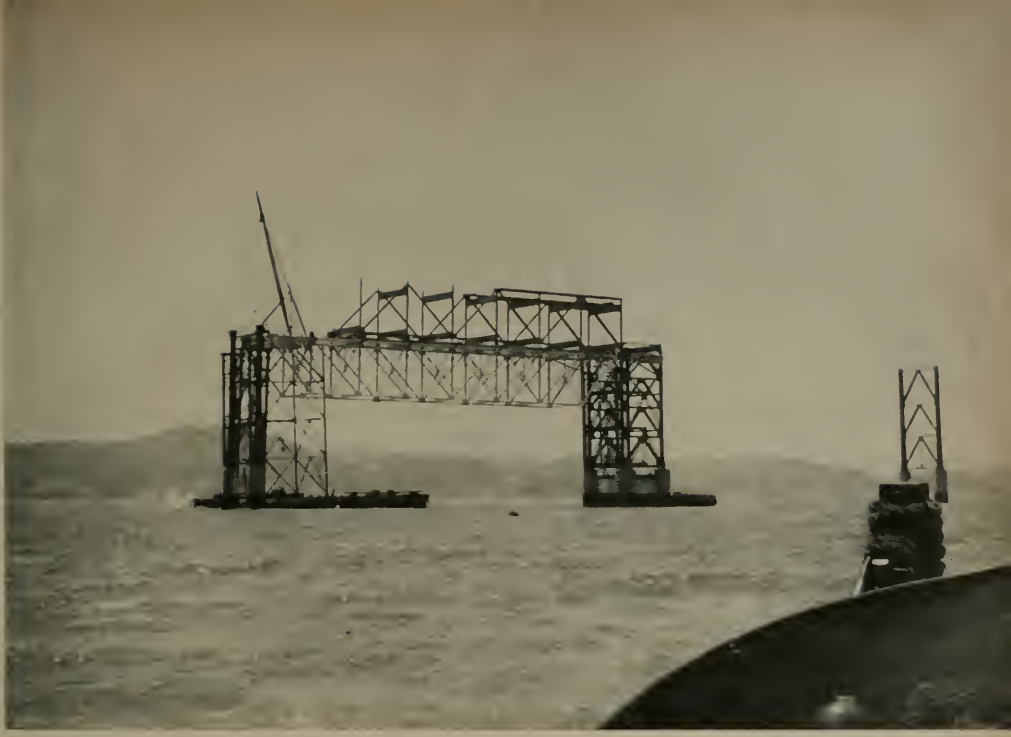


Fig. 4—Position of Permanent Steel Truss Being Erected Upon Aluminum Falsework Truss.

In designing the structual aluminum, it was found that there were not many engineers who had any previous experience in designing aluminum. The firm of Earl and Wright, San Francisco consulting engineers, has certainly performed a wonderful job of designing. They followed closely the "Specifications For Heavy Duty Structures of High-Strength Aluminum Alloy" published as paper No. 2532 in Volume 117 (1952) of the Transactions of the American Society of Civil Egineers.

These specifications were drawn up for the highest strength aluminum alloy (14S-T6), formed by alloying copper and other light metals with aluminum followed by heat-treating. According to these specs, the following factors in structural aluminum design are important.

Basic allowable tensile working stress is 22,000 psi based on minimum yield strength of 53,000 psi and minimum tensile strength of 60,000 psi.

Modulus of elasticity in tension and compression is 10,600,000 psi (this compares with 30,000,000 psi for steel).

Coefficient of expansion is 0.000012 per degree (double the 0.0000065 per degree F. of steel).

Weight is .10 pci (steel is .28 pci).

Aluminum structures must be protected by paint. Alloying aluminum reduces resistance to corrosion. The fabricated members are first given a thorough cleaning with a mild phosphoric acid solution. This is followed by a prime coat of zinc chromate. Finish coat for the erected spans is an aluminum pigmented paint.

The Richmond-San Rafael Bridge was designed by the Division of San Francisco Bay Toll Crossings under the direction of Norman Raab. The engineers for the Judson Pacific Murphy-Kiewit joint venture who actually designed the aluminum false work, are Earl and Wright of San Francisco.

Construction of the huge project is on schedule, and it is estimated that this job will be complete and ready for traffic late in 1956.

FRANCIS J. MURPHY
Project Manager

Structural Engineers Association Southern California

INSTALL NEW OFFICERS

CONSIDER PROBLEMS OF STEEL DECK DIAPHRAGMS

The Structural Engineers Association of Southern California installed Henry Layne as president for the ensuing year, and seated a number of new officers and directors to serve with him. William Wheeler was named vice-president, Donald Moran, Secretary-Treasurer, and elected to serve on the board of directors were: Cydnor M. Biddison and Harold L. Manley.

R. R. Martel, past president and Honorary Member since 1945, and Oliver G. Bowen, past president and newly named Honorary Member, were presented plaques in honor of their Honorary Memberships.

Following installation of Officers and awards to the Honorary Members, the first program of the year began—a panel discussion on Light Gage Steel Diaphragms in Building Construction. Ernst Maag, Supervising Structural Engineer, State Division of Architecture, was the Moderator. Members of the panel were: Steve Barnes, Carl Johnson, F. J. Converse, Ralph J. Wirth, G. L. Revell, and Clarkson W. Pinkham.

Steve Barnes, consulting structural engineer, began the discussion by giving a general introduction to the problem of steel deck diaphragms. Among structural engineers, especially on the West Coast, the word "diaphragm" has come to denote a flat shear-resistant sheet or membrane, either in a horizontal or vertical plane, used to transfer forces resulting from earthquake, wind or other causes, to the foundations of a building. Metal decking has been used for years to support vertical loads, and the American Iron & Steel Institute provided much needed standardization governing the use of light gage steel members for structural purposes in buildings by publishing a Design Specification in 1946. However, this standard did not contemplate the use of such members as horizontal diaphragms, and recourse to testing was the only means of obtaining necessary information relating to this new usage.

With regard to suitability as diaphragms, commercially available metal decking may be classified into four types:

1. The corrugated, Mansard or standing seam
2. The open rib deck
3. The closed rib deck
4. Cellular deck

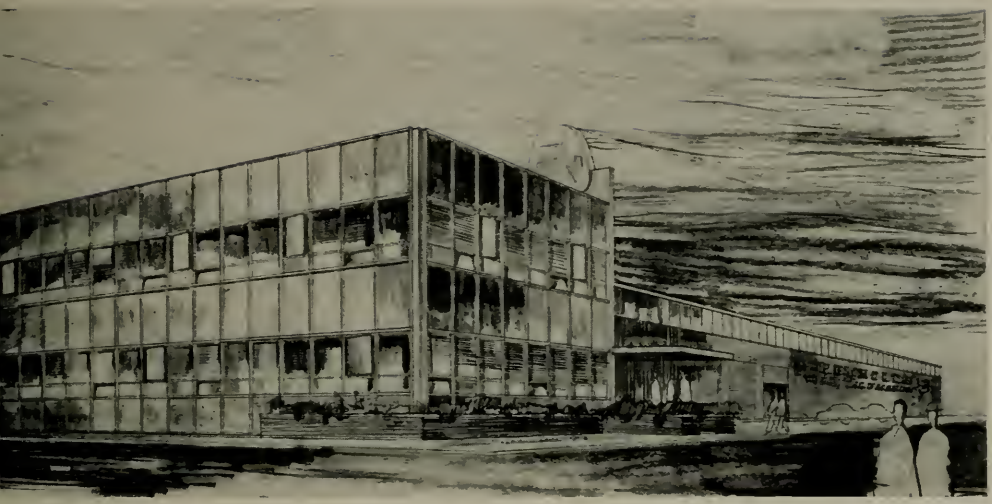
Retiring president William Wright (left) passes gavel to incoming president Henry Layne.

The cellular deck consists of a continuous flat sheet to which is spot welded a corrugated sheet, and possesses the greatest shear-resistant properties. When the individual sections of a roof or floor are tied together by welding, a continuous flat plate may be developed to serve as the diaphragm for an entire building.

Testing has brought to light the varying properties of many decks, and indicated that a more suitable deck could be developed. Additional data is needed to allow a fuller understandisg of many factors, such as the composite action of a concrete slab poured on a steel deck.

Carl Johnson, consulting structural engineer, discussed practical design procedures in the light of experience gained during a series of tests on a full scale building in 1947, during which he worked closely with Professor F. J. Converse of the California Institute of Technology. Several theoretical assumptions as to the shear distribution through a transverse section of a diaphragm are possible, but the assumption of "plate girder action" resulting in uniform shear throughout transverse sections most closely matches the test results. The A.I.S.I. Design Specification contemplates much higher stressses than are normally encountered in building diaphragms, and consequently the two most important considerations become the provision of satisfactory boundary members and attachment to them, and the pattern of

(See page 33)



REYNOLDS METAL COMPANY'S NEW OFFICE AND WAREHOUSE

SAN FRANCISCO, CALIFORNIA

LOUBET & GLYNN, Architects

HAAS & HAYNIE, General Contractors

The aluminum industry's first combination sales office and warehouse building will be erected by Reynolds Metals Company at Third and Marin Streets, San Francisco, according to an announcement by David P. Reynolds, the aluminum firm's vice-president in charge of sales. The warehouse portion will be leased to Clingan & Fortier, Inc., a distributor for Reynolds in the area.

This is the first completely all aluminum skin building within San Francisco City limits and indicates the extent of recognition being gained by all aluminum exterior covering building materials.

The San Francisco building, which will be constructed largely of aluminum, will have about 38,000 square feet of warehouse area, and 7,500 square feet of office space on two floors. The building will have an all-aluminum exterior—exterior walls will consist of Reynocell panels, which are lightweight aluminum-faced panels with a honeycomb interior composed of resin-impregnated paper.

Other aluminum products to be used include vertically pivoted windows, acoustical system, interior partition system, fixed casement windows, and eight-inch ribbed embossed roofing and siding. A porcelainized pylon will stand atop the building's entrance.

Mr. Reynolds said: "Putting our sales offices and warehouse facilities under a single roof will make possible a new era in the merchandising of aluminum products."

American Institute of Architects

Clair W. Ditchy, President

Earl T. Heitschmidt, 1st Vice President — George Bain Cummings, Secretary
Howard Eichenbaum, 2nd Vice President — Leon Chatelain, Treasurer
Edmund R. Purves, Executive Secretary

National Headquarters—1741 New York Avenue, N. W., Washington, D. C.

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East Bay Chapter:
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RENO: E. Keith Lockard, President; Graham Erskine, Vice-President; George L. F. O'Brien, Secretary; Edward S. Parsons, Treasurer. Directors, M. DeWitt Grow, David Vhay, Edward S. Parsons. Office of Pres. 232 W. 1st St., Reno. LAS VEGAS: Walter F. Zick, P.O. Box 2107, Las Vegas.

Nevada State Board of Architects:
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SAN DIEGO CHAPTER

Earl T. Heitschmidt, First Vice-president of the American Institute of Architects, Los Angeles, Architect, and Donald B. Kirby, Reginal Director of the Seirra-Nevada District of the American Institute of Architects, were the principal speakers at the January meeting. They discussed a number of activities of the A.I.A. and outlined the architects national program for the coming year.

Election of officers included: Sam W. Hamill, President; Frank L. Hope, Vice-president; Raymond L. Eggers, Secretary, and Sim Bruce Richards, Treasurer. Named to serve on the Board of Directors were: Victor L. Wulff, Donald Campbell, Louis A. Dean, George Lycos, and Richard L. Pinnell.

ARCHITECT WILL SERVE ON DESIGN COMPETITION

William G. Balch, president of the Southern California Chapter A.I.A., has been named to serve as a member of the board of judges for a Southern California and Arizona student design competition.

Aimed at encouraging young interior designers and providing a means of recognition for their talents, the contest is being sponsored by the Southern California chapter of the American Institute of Decorators.

College and university students of interior design are to submit plans for the decoration of the living-dining area of a contemporary one-story house designed for a family of three, and stressing indoor-outdoor living.

Balch will serve with A.I.D. president Robert Han-

Orange County Chapter:
Philmer J. Ellerbroek, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burrows, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

Oregon Chapter:
Holman J. Barnes, President; Albert W. Hilgers, Vice-President; Donald W. Edmundson, Secretary; DeWitt C. Robinson, Treasurer, and H. Abbott Lawrence, Trustee. Office of Secretary, 325 Henry Bldg., Portland.

Pasadena Chapter:
Henry C. Burge, President; William H. Taylor, Vice-President; Douglas Byles, Secretary; Edward Davies, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Sam Hamill, President; Frank Hope, Vice-President; Lee Eggers, Secretary; Bruce Richards, Treasurer; Directors, Victor Wulff, George Lykos, Dick L. Pinnell, Donald Campbell, Louis A. Dean. Office of Secy.: 4730 Palm Ave., La Mesa, Calif.

San Joaquin Chapter:
John P. Miller (Fresno), President; Byron C. Brodrick (Fresno), Vice-President; Allen Y. Lew (Fresno), Secretary; Lloyd J. Fletcher (Visalia), Treasurer. Directors, Wm. G. Hyberg, Robert C. Kaestner, Maurice J. Metz. Sec. Office, Fulton-Fresno Bldg., Fresno.

Santa Barbara Chapter:
Lewis A. Storrs, President; Lutah Maria Riggs, Vice-President; Robert Ingle Hoyt, Secretary; Roy W. Cheesman, Treas. Corresponding Secretary: F. Raymond Ford, 238 La Marina, Santa Barbara.

Southern California Chapter:
William Gless Balch, President; S. Kenneth Johnson, Vice-President; Stewart Granger Secretary; Stanley R. Gould, Treasurer. Directors, Cornelius M. Deasy, Herman Charles Light, George Vernon Russell, Ulysses Floyd Rible. Executive Secretary, Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson I. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnston, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelsen, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Robert L. Durham, President; Francis E. Huggard, 1st Vice-President; Thomas F. Hargis, Jr., 2nd Vice-President; Barney E. Grevstad, Secretary; Lloyd J. Lovegren, Treasurer. Miss Dayis Holcomb, Exec-Secy. Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter:
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors, Kenneth Storment, Victor L. Wulff. Office of Secy.: 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

CALIFORNIA COUNCIL OF ARCHITECTS
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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tosker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

ley; Ross Bellah, art director for Columbia Pictures Corp.; Dan Aberle and Edna Green. A.I.D. board members.

First prize winner will be given his choice of an expense-paid six-week trip to Europe or a $1000 scholarship to any school he selects. The European tour is in conjunction with the 1955 national convention of the American Institute of Decorators which will be held on shipboard enroute to Portugal. The party will embark from New York April 22 aboard the TSS Olympia.

EAST BAY CHAPTER

The January meeting was the annual meeting for the election of officers and hearing committee reports.

Highlight of Chapter accomplishments during the year included: opening of Chapter officers, the Heart Committee program, and the participation in a number of outstanding community activities including the Home Show.

ARCHITECT DANIELS RETIRES FROM DIVISION OF ARCHITECTURE

W. K. Daniels, retires from his position with the California Division of Architecture on February following 40 years of service with the State.

Assistant State Architect, Daniels began his carreer as a junior architectural draftsman in 1914 with the State Board of Harbor Commissioners and transferred to the Division of Architecture a year later. During the following decade he worked in the architectural drafting room and in various capacities including the position of chief architectural draftsman. In 1926 he was appointed Deputy Chief of the Division and in 1937 was named Administrative Assistant and shortly reclassified as Assistant State Architect, Administrative.

When Daniels entered State Service in 1914 the organization had a total personnel of 37 employees. The construction output totaled $1,365,000 for the particular bienneum (2 years). During his 40 years of service the peak personel for the Division increased to a total of 1243 employees. Construction contracts in force have amounted to $110,000,000 for a single year period which represents a project level cost of $137,000,000.

Daniels has served under 9 Governors, 10 Public Works directors and 2 State Architects.

OREGON CHAPTER

Entries to the Home Show contest were exhibited and discussed at the January meeting held in Portlend.

Results of election of new officers were announced with Donald J. Stewart being elected president. Robert Fritsch was elected Vice-president, Mary A. Hutchins, Secretary; Walter Gordon, Treasurer, and Holman J. Barnes member of the board of directors.

It was announced the Annual Meeting would be held on February 22 at the Multinomah Hotel, Portland.

New members: Warren Carkin, Ralph Appleman, William F. Hawkins, and Nancy Reed, Associate members. Donald S. Blair, William L. Fletcher, James W. Jamison, Kenneth W. Nelson, Norbert W. Pieper, Charles H. Scrogin, Si Stanich, Henry J. Voderberg, J. Keith West, and Saul Zaik, Junior Associates.

WITH THE ENGINEERS

Structural Engineers Association of California

G. A. Sedgwick, President (San Francisco); C. M. Herd, Vice-President (Sacramento); James L. Stratta, Secy-Treas. Directors, Ben Benioff, Ernest D. Francis, C. M. Herd, Harold Omstead, Michael V. Pregnoff, G. A. Sedwick, Joseph Sheffet, James L. Stratta, J. G. Wright, William T. Wright. Office of Secy., 140 Geary St., San Francisco 8.

Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Claud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellisan, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy-Treas. Directors, C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"Recent Developments in Decreasing Shrinkage Cracks in Concrete Flat Slabs" was the subject of a talk by Jay E. Jellick, manager of the Portland Cement Information Bureau, and "Field Practice in the Use of the Schmidt Concrete Test Hammer," by Ed. J. Howard, Testing Engineer of Pacific Coast Aggregates, Inc., featured the January meeting held in the Engineers Club, San Francisco.

HOWARD R. SCHIRMER
President, SEANC

Jellick outlined the use of an absorbent sand cushion under concrete slabs on the ground, and the use of fog spray for curing concrete slabs which are placed over a non-absorbent base.

Howard described the field of use of the Schmidt Concrete TestHammer, and demonstrated its actual use on samples of concrete. He also showed a number of picture slides of actual tests being made on projects in the San Francisco bay area.

Elected to serve as officers of the SEANC were: Howard A. Schirmer, President; Walter L. Dickey, Vice President; Harry B. Corlett, Secretary; William K. Cloud, Treasurer, and Cecil H. Wells, Assistant Secretary. Named as Directors were: Wesley T. Hayes, Jack L. Young, William W. Brewer, and Clarence E. Rinne.

The following were reported as new members: Philip I. Baker, Richard M. Collins, T. Y. Lin, and E. Kenney McKesson.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Colonel Edwin M. Eads, Air Force Installation Representative, was the principal speaker at the January meeting, taking as his subject "USAF-NATO Construction in France."

Col. Eads graduated in architecture from the A & M College of Texas, and since joining the military in 1940 has held a number of posts in this country and abroad.

Currently he is serving as AF Installations Representative for the South Pacific Region.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

A panel discussion on Light Gage Steel Diaphragms highlighted the January meeting, with Ernie Maag serving as Moderator and Steve Barnes, Fred Converse, Carl Johnson, Clarkson W. Pinkham, and Ralph J. Wirth panel members.

Installation of officers for the new year included: Henry M. Layne, President; William T. Wheeler, Vice President; Donald F. Moran, Secretary-Treasurer, and Directors Cydnor M. Biddison and Harold L. Manley.

Annual report and committee reports were heard, indicating the SEASC had been very busy during the past year.

New members to the SEASC include: Douglas H. Beetham, R. E. McClellan, Jr., Gordon C. Murray, and Zorah E. Sheffner, Associate Members. Byrne Eggenberger, Member; Harold J. Woody, Junior Member, and Burke L. Gephart, Allied Member.

AMERICAN WELDING SOCIETY LOS ANGELES SECTION

"Engineering & Architectural Design of Welded Buildings," by A. L. Fenalson, Welding Supervisor of Consolidated Western Steel Company, and "Welded Steel Construction," by Charles I. Orr, Assistant Chief Engineer, Consolidated Western Steel Company, formed the program of "Structural Steel Night" at the Section's regular January meeting held in the Roger Young Auditorium.

In attendance as guests were members of the Structural Engineers Association of Southern Cali-

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga, Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

fornia, the American Society of Civil Engineers, the American Institute of Architects, and the American Welding Society.

FEMINEERS

The FEMINEERS held their January 19th luncheon meeting at the San Francisco Museum of Art. The program for the day includes a tour of the art exhibits and the installation of new officers for 1955.

Mrs. Arthur B. Smith Jr., outgoing president, conducted a brief installation ceremony. New officers are, Mrs. Kenney McKesson, President; Mrs. John Fies, Vice President; Mrs. Victor Sander, Secretary; Mrs. Fred Nicholson, Treasurer. The Board of Directors installed are: Mrs. Theodore E. Newman, Mrs. Bernard A. Vallerga, Leslie W. Graham, J. A. Paquette, and Arthur B. Smith Jr.

CIVIL ENGINEERS NATIONAL CONVENTION IN SAN DIEGO

Engineering and economic problems and their solutions, with respect to pipeline construction, mass transportation, power, sanitary engineering, airport development, irrigation and drainage, highway design and other major concerns in the continuing expansion of facilities in this country will be discussed in papers and panels at the national convention of the American Society of Civil Engineers in San Diego, Feb. 7-12.

In an announcement of the program, at the headquarters in New York of the 102-year-old organization, oldest national society of engineers in the United States, it was stated the technical reports will cover an unusually wide range of engineering accomplishments and plans for the future.

While many of the addresses will be on the subjects of local and area concern, others will be of national importance. In the former category will be papers on California water supply. In the latter will be a paper on radioactivity water decontamination by Conrad P. Straub, Senior Engineer, United States Public Health Service, Oak Ridge, Tenn., National Laboratory.

S. D. Bechtel, Jr., of the Bechtel Corp., and Philip Reynolds, of Pacific Gas & Electric Co., will report the former with a movie and the latter with a technical paper, on the construction of the 34-inch natural pipeline from Topock, Ariz., to Milpitas, Cal., almost 500 miles.

Luncheon speakers will include Maj. Gen. Samuel B. Sturgis, Jr., Chief of the Bureau of Yards and Docks.

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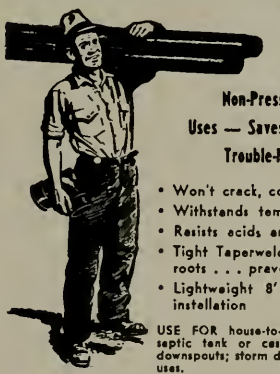

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Carl B. Frank, **Detroit Steel Products**, 921 Larkin Street
Vice-President, John C. Cowley, **The Brookman Co., Inc.**, 2833 Third Street
Secretary, John J. O'Connor, **H. H. Robertson Company**, 306 Sharon Bldg.
Treasurer, Phillip F. Brown, Jr., **Otis Elevator Company**, No. 1 Beach Street

Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

Glidden's new Maintenance Finishes Painting Specifications and Product Guide was introduced with slides and a talk by Mr. Robert B. Woodward, District Sales Promotion Manager.

Published as an aid to the architect, Glidden's 28-page Product Guide is designed for quick and easy reference. Products and recommended finishing schedules are shown for all types of surfaces.

An innovation is the assignment of numbers to all product specifications. This was done to alleviate the tedious repetition of paint specifications, which can run as many as three or four pages at times. Since leading contractors will have the same book finishing schedules may be referred to by number.

It was pointed out by Mr. Woodward that today, when such rapid strides are being made in the paint industry, even the paint manufacturers have trouble keeping up with latest developments in the chemical industry.

Some of Glidden's new products are Spred Glide-On, a polyvinyl, alkali and fade-proof paint for stucco and concrete; Duo-Tex, an intumescent alkyd, fire-retardant paint.

Duo-Tex is said to swell and char on contact with flame. The char ash blanket insulates the structural surface from flame, retarding combustion.

The Company's famous Spred Satin now is made in a dead flat for use primarily in commercial and industrial buildings, and is sold under the label, Professional Ultra Flat Latex.

Also described at the meeting were the services of Glidden's Color Studios, where elevations are made by cutting out paper coated with the actual paint and colors recommended. This is a free Glidden service to architects.

MEETING

The February Informational Meeting will be held on February 7, 1955 at the Sheritan-Palace Hotel.

Robert MacFarland of the Minneapolis-Honeywell Regulator Company will be the guest speaker and will discuss the use of "Temperature Control as a Profitable Investment in Apartment and Commercial Buildings."

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

OPENS TEXAS OFFICE

John Boethling of Los Angeles, has been appointed manager of the new Houston, Texas, office of the General Air Conditioning Corpn, according to a recent announcement by W. H. Laband, president of the company.

Other offices of the firm are maintained in San Francisco, Seattle, Chicago, New York, Miami, Tampa, Boston, Philadelphia and Cleveland in addition to the main office and factory in Los Angeles.

GYMNASIUM BUILDING

Federal funds have been approved and drawings completed for construction of a $374,099 gymnasium building at the Garfield Jr. High School in Berkeley.

The architectural firm of Masten & Hurd of San Francisco designed the building which will be of reinforced concrete and structural steel construction.

ARCHITECT SELECTED

The architectural firm of Boland & Gianelli of Vallejo has been commissioned by the Pittsburg Unified High School District of Pittsburg, to draft plans and specifications for the construction of an Administration Building for the school district in Pittsburg.

ELECTED AGC DIRECTOR

Mel J. London, vice-president in charge of marketing for Calaveras Cement Company, has been elected a director of the northern California chapter of the Associated General Contractors, Inc.

HOTEL RENO

Architects Vick & Sharp of Las Vegas, Nevada, are completing plans for construction of a new 300-room Silver Lode Hotel in the City of Reno, Nevada, at an approximate cost of $3,000,000.

The two story frame and stucco building will have a brick veneer front, and will include a casino, dining room and kitchen.

HOUSING PROJECT

The San Francisco architectural firm of Hertzka & Knowles is working on plans for construction of a 360-unit low-rent Housing Project to be built in the City of San Francisco at an estimated cost of $3,000,000.

Construction will comprise 2-story and 2½ story row-houses of frame and stucco.

ARCHITECT OPENS OFFICE

W. E. Blessing has opened offices at 514 N. Daniel Way, San Jose, for the general practice of architecture.

U.S. STEEL MAKES STAFF PROMOTIONS

A number of executive personnel promotions were recently announced by United States Steel Corpn president Alden G. Roach.

R. E. Williams has been promoted to Assistant Vice-President—Sales for U.S. Steel's Columbia-Geneva Steel Division. A graduate of U.C. with a degree in civil and structural engineering, Williams served as Director of Production and Planning at Pittsburg (California).

T. R. Rooney has been named Vice-President—Production; Kenneth Lieber has been appointed Vice President—Engineering; and J. B. DuPrau has been named Assistant to the President of Consolidated Western Steel Division of the U.S. Steel Corpn. Du Prau will retain his position as Vice-President and Assistant to the President of U.S. Steel's Columbia-Geneva Steel Division.

INDUSTRIAL TRACT DEVELOPMENT SET

George Novikoff, engineer, Los Angeles, is completing plans for construction of 150 buildings in a new 180-acre industrial tract located at the Grand Central Air Terminal, Glendale, for the Coordinated Construction Company of Hawthorne.

The tract will be divided into light manufacturing sites, with all buildings individually designed, landscaped and asphalt-concrete off street parking. Buildings will be of pre-cast, reinforced concrete, tilt-up construction with tapered steel girders and gypsum roof decking over steel framing.

Cost of the project is estimated at $55,000,000.

SCHOOL BONDS APPROVED

Voters of the Jefferson Elementary School District of Daly City approved $1,486,000 in school bonds at a special election.

Funds from the sale of the bonds are to be used in constructing two new elementary school buildings and building additions to the present elementary school facilities.

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PERSONALITIES

WILLIAM C. HARR
General Contractor
San Francisco, California

Born in Butte, Montana, Harr moved to California at the age of four and attended public schools in San Francisco; entered the University of San Francisco and shortly thereafter enlisted in the U. S. Army Air Corps. Upon termination of military service returned to the construction business as superintendent. In 1946 started estimating work under tutoring of Roy I. Gummere; was with Central California Construction Company for five years as superintendent, estimator and manager. Became associated with Moore & Roberts in 1950 as Estimator, and became Chief Estimator in 1952, and General Manager in 1953 when Roy I. Gummere moved to Arizona. Assisted in organization of the new firm of E. H. Moore & Sons, and organized his own contracting firm W. C. Harr, Inc., with offices at 709 Mission Street, San Francisco, in August of this year.

WILLIAM C. HARR
W. C. Harr, Inc.
General Contractors

"Bill" is married and resides in South San Francisco with his wife and two daughters. He is a member of the A.G.C., active in committees; member of the Elks; and member of the Air Force Association.

Harr has been connected with work at the Dugway Proving Grounds, Utah; Pittsburg housing; Franklin & Jefferson Schools, Berkeley; Lodi Hospital; Sacramento Greyhound Bus Depot; Hillside and El Rancho in South San Francisco; Sonoma County Hospital, and the John Muir School (San Leandro), and Holbrook School in Concord.

NEXT MONTH: Louis Bodmer, A.I.A. Architect, San Diego.

WOODWORK INSTITUTE

(From page 5)

lines . . . against nothing, but 100% for wood. From this policy there has been no deviation.

In the wake of several meetings it was apparent that the program must be split into three broad fields, to wit: service, education and promotion. Since funds would not permit activating all three at once it was decided that the first one to start would be service.

This service to be one of technical help and information concerning millwork, and made available, gratis, to the entire architectural profession of California, draftsmen and others. This meant as the number one job, the drafting of a millwork manual and establishing of standards of materials and workmanship for the industry. Obviously, this posed a task much beyond the capabilities of any single individual, and also, a far greater talent cost than the budget could afford. Therefore, the firms of Hollenbeck-Bush Planing Mill, Fresno — Pacific Manufacturing Co., Santa Clara — The Union Planing Mill, Stockton and the Sierra Mill and Builders Supply of Sacramento generously offered to loan to W.I.C., free of charge, their respective top men to make up a Technical Committee for the single purpose of writing a "Manual of Millwork" for the industry.

In the sequence of the firms named these men are; Sherry Karns, George Lefler, Al Smith and Erick Ahlbom.

This committee undertook the assignment in the late spring of 1952 and finished the job in March 1953, during which time they held twenty-one, 2-day work sessions, plus hundreds of hours on research and details between meetings. The final manual was a beautifully covered book, loose-leaf and sturdy, consisting of twenty sections. Three thousand copies were printed at a total cost of $10,000.00. These were distributed complimentary to every licensed Architect in California and W.I.C. members. Free copies were also mailed to many builders, engineers, draftsmen, school districts and State and Federal officials.

The standards embodied in this book have been adopted by the industry and accepted by the architectural profession, the State Department of Architecture and practically by everyone who has to do with millwork in the design or construction of a building. The production and distribution of this manual represents the initial, big step taken by the millwork industry in demonstrating its sincerity and determination to intelligently do something about the situation referred to in items 1 to 5 in the beginning of this article.

This excellent service to the building trades will be continued and augmented by supplemental "specs" and details which will be developed from time to time to be inserted in the manual and mailed, free, to every holder of the book. In addition, the work of Mr. Harter in the field, assures the architects, engineers and building "Spec writers" of the fullest cooperation pertaining to the mutual problems that are common to them and to the millwork industry. In the February issue of the Architect and Engineer we will feature the technical highlights of the Manual and the current work of the W.I.C. Technical Committee.

STEEL DECK DIAPHRAGMS

(From page 24)

welding used to join the individual sections into an equivalent flat plate.

A maximum weld spacing of four to five feet on centers with increased stitch welding adjacent to the boundaries should be provided. Welding throughout the diaphragm may well be based on an assumed paraholic (beam) shear distribution through transverse sections, and should give consideration to the latest available data on weld values in light gage steel. Title 21 of the California Administrative Code gives values for various welds on 18 gage minimum material, and values are in good agreement with some publications of decking manufacturers. Recommended weld values contemplate a factor of safety of approximately 4, and are equivalent to normal weld stresses based on a throat equivalent to the thickness of the material.

Steel diaphragms used for wall panels in small buildings such as service stations were discussed by Ralph J. Wirth, Chief Engineer, California Steel and Construction Company. Prior to tests in 1949, design usually contemplated a flexible steel frame to resist lateral forces, and neglected the rigid wall panel diaphragm inserted in the frame openings. Now that the building departments have assigned values to such panels, a more realistic analysis is being used. Web shear or buckling usually limit these diaphragms, and couples formed by the connections of the individual members provide the necessary resistance. Sheet metal screws are effective connectors for this type of panel, but more research will be required before allowable values can be assigned for this purpose. Once again, it was emphasized that the important factor is the way is which the diaphragm is put together.

Practically all the testing of steel deck diaphragms in this area has been done by Professor F. J. Converse of Caltech, who commented on, and described, several of the testing set-ups. In addition, he noted five special requirements for testing, which are particularly applicable to tests of an unusual nature. First of all, a thorough understanding of the object of the test by all parties concerned will be of great help. Secondly, proper equipment must be available —particularly measuring devices capable of performing within the range of values to be measured. And then more equipment should be on hand to provide for unexpected developments during the actual running of the tests. Two checks of readings should be made, and provision must be available for readings greater or less than those anticipated. Proper preparation, including mentally carrying through the entire test beforehand, usually saves many troubles and of course careful execution of the test is always essential.

Practical details of welding, both as it has to do with sheet metal iteself, and with the connections of sheet metal to steel supports were outlined by G. L. Revell of the Cal-Metal Corporation. Among the problems peculiar to the welding of metal decking, two deserve special mention. The zinc coating existing on galvanized or galvannealed sections must be completely burned off from the weld area if a brittle weld is to be avoided. This may be accomplished by the use of a high current and the E7016 electrode, with a circular motion creating puddling of the metal and burning out of the zinc. No hydrogen impregnation of the steel appears to result from this process. Of course, the amount of galvanize on the particular

(See page 34)

SAN FRANCISCO ARCHITECTS WILLIAM CORLETT WENDELL SPACKMAN FORM PARTNERSHIP

Two prominent California architects, William Corlett and Wendell Spackman have entered into a partnership to engage in the general practice of architecture.

WILLIAM CORLETT
A.I.A. Architect

Two San Francisco architects, William Corlett and Wendell Spackman, announced today that they had entered into a partnership to engage in the general practice of architecture at 347 Clay Street, San Francisco.

The new firm will be known as Corlett and Spackman, Architects.

The two men, both graduates of the School of Architecture at the University of California, are officials of the Northern California Chapter of the American Institute of Architects, the oldest association of the profession in the West. Spackman is president and Corlett, a director.

WENDELL SPACKMAN
A.I.A. Architect

Both are well known in San Francisco and throughout the Bay area for the commercial and industrial structures,

(See page 34)

STEEL DECK DIAPHRAGMS

(From page 33)

section to be welded is important in this regard, and the increased quantity of zinc on standard hot-dipped galvanized sheets makes them slightly harder to weld than galvannealed sheets.

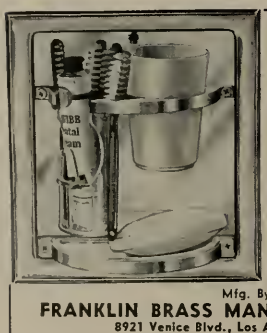
Secondly, careful control of distortion and warpage is required in both plant fabrication and field connections. A very small amount of heat in light gage plate may result in terrific distortions, and special processes are used in plants. Field welding may be accomplished satisfactorily if the sheet metal is within the thickness of the plate to a structural shape—and this means a close tolerance in manufacturing!

Field inspection of such welding can be a very simple process. Basically in welding to a heavy structural backing, a hole is burned through the sheet metal, and the cooling of the weld fuses the metal to the backing. Welding through a washer is unnecessary. Visual inspection to determine if holes exist around the weld is usually sufficient for such plug welds, and also for spot welds. Irregularities in output of the welding machine for continuous welds are best checked by measuring the burn-off rate of the electrode—a convenient and practically foolproof method.

Theoretical problems involved in the design of metal deck diaphragms were discussed by Clarkson W. Pinkham, civil engineer with S. B. Barnes and Associates. Much of the basic theory of design in light gage materials was evolved from experience gained in the aircraft industry were conditions are usually more complex than are normally found in building panels. Stresses are usually higher, but many more stiffening elements are correspondingly provided. Not all the resulting requirements of the A.I.S.I. Design Specification are met by many commercial deckings. It is interesting to note that test results have indicated little difference between action when diaphragm loads are applied parallel to, or perpendicular to, the deck units.

The stiffness of metal decking diaphragms is less than that of concrete diaphragms but appreciably more than that of either plywood or diagonally sheated wooden diaphragms. Deflections are ordinarily estimated as the sum of bending deflection, shear deflection and deflection due to yielding of the welds or other attachments.

A lively discussion period following the series of talks clarified many of the finer details.



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CLARENCE T. SHOCH ENGINEER VISITS WEST COAST

Clarence T. Shoch, president of the National Society of Professional Engineers, is making a speaking trip through the far West and Midwestern states during January and February.

CLARENCE T. SHOCH
Engineer

The NSPE official will speak before affiliate professional engineering societies in Seattle, Boise, San Francisco, Fresno, Los Angeles, Pasadena, Tucson, Dallas, St. Paul, Kansas City, Kan., Wichita, Oklahoma City, and Kingsport, Tenn.

Mr. Shoch, a graduate electrical engineer, is assistant to the vice president of the Commercial Department of the Pennsylvania Power and Light Company. His home is in Allentown, Pa.

Mr. Shoch will center his talks around the two subjects of "The National Society Fills a Void," and "Statesmanship in Engineering."

DOUGLAS BIRD NAMED PLANT MANAGER

Douglas C. Bird has been appointed plant manager of the new roofing factory being constructed in Wilmington, California, by the Pabco Company. He has been with the company in Portland, Oregon.

CORLETT AND SPACKMAN

(From page 33)

schools, churches, and residences which they have designed. Corlett has been awarded several national honors for structures which he designed, including the Greenbrae elementary schools in Napa. He was the only architect that Time Magazine named on its list of the one hundred San Francisco "Leaders of Tomorrow".

Spackman was a member of the architectural staff of the Standard Oil Company of California before entering into private practice in 1945. Among the many

projects on which he has been privately engaged are over 200 Pacific Telephone and Telegraph Company buildings in Northern California and Nevada.

The projects which the new firm has already been awarded include structures for the U.S. Army Corps of Engineers and schools in Alameda, Marin, and Napa counties. Offices of the firm are located at 347 Clay Street, San Francisco.

ARCHITECTURAL SCHOLARSHIP

Establishment of a $500 Royal Title Scholarship to be given annually to outstanding students of architecture in Texas, was recently announced by Horace H. Porter, president of the Royal Tile Manufacturing Co.

Selection of award winners will be under supervision of the newly formed Texas Architectural Foundation, an affiiliate of the Texas Society of Architects.

ARCHITECT HONORED

Ludwig Mies van der Rhoe, director of architecture at Illinois Institute of Technology, was recently made an honorary member of the State Academy of Art in Dusseldorf, Germany.

OLYMPIC GAMES—1956

(From page 19)

measure 20 metres by 31 metres.

Professor Brian Lewis, professor of architecture at the University of Melbourne, was chairman of the seven-man committee of assessors which judged the contest.

"The winning design is one out of the box," he commented. "It is, in addition to being the most economical one submitted, by far the most brilliant and original. This is one of the few cases since 1900 that Australian architecture has got into world class, and the pool will embody much of interest to other countries."

Professor A. J. Francis, professor of civil engineering, and a members of the judging panel, described the structural method as "brilliant and original."

Mr. Robin Boyd, architectural expert on the panel, in a detailed appreciation of the winning design, said, "It will be a unique and exciting building. Its great sloping sides, rising among the trees of the parklands, will mark a turning point in the development of contemporary architecture here.

"This is a modern building in every sense of the word, utilising advanced engineering principles and expressing them vigorously, with confidence and no compromises with traditional forms."

Mr. Boyd said that the designers had hit upon a construction method ideally suited to the practical requirements and one which also happened to be a new development in "pre-stressing."

On each side of the central pools, the tiers of seating sloped up on stepped floors set at an angle of about 30 degrees and the whole was covered by a roof. These were the basic elements. Normally supports of some sort would be provided under the sloping floors but instead the architects had made the basic elements self-supporting by taking the spread upper ends of the seating floors and "tying" them together by means of the roof. Special design within the beams and roof trusses was necessary to withstand the forces set up.

The most revolutionary effect, said Mr. Boyd, occurred at the long sides of the structure. The heavy downward thrusts of the roof and seating, normally requiring thick columns for support, had actually been reversed. The heavy sides had no visible means of support. The roof on which they hung was the nearest practical approach to a "sky hook."

Instead of colunms there were only light tension cables two inches square, pulling upwards and acting as stabilizers against wind loads.

Designers' Report

In their accompanying report, the successful designers said that the fundamental structural problem was to support and provide a roof over the sloping seating.

Seating was supported by sloping girders at 18 ft. centers. A girder could be supported by vertical reaction from below in the conventional manner. This

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had the disadvantage that a large compressive force was carried by a long column. This raised a number of difficulties. If the column was of steel the ratio of length to radius gyration was high, and relatively low working stresses must therefore be used. If the column was in concrete, it had to be large. Further, if an arch roof were used, the horizontal thrust of the arch was applied to the base structure high above the ground, resulting in large overturning moments in the footings.

The alternative method of supporting the sloping girders carrying the seating was by horizontal reaction at the top. This made the supporting reaction a tensile force and could be used efficiently and economically. The supporting tie used was a truss with a large proportion of the reaction from the girders thrown into the top chord. This reduced the compression in the top chord caused by the normal vertical roof loads and enabled the economical span/depth ration of the truss to be considerably lowered.

Pin joints were used to give the determinate structure, and vertical ties stabilized the structure against wind and live loads. The vertical ties were anchored into columns of the ancillary concrete structures below. The dead load on each anchoring column was considerably greater than the maximum tension in each tie.

The final structure, therefore, consisted of two components—the seating and the roof—and the resulting form was the minimum volume.

The design lent itself to fast economical construction, the report said. Plate girders would be erected in pairs by cranes and supported by temporary tubular scaffolding towers while the truss was raised into position.

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VERN R. HUCK ELECTED HOME SHOW PRESIDENT

Vern R. Huck, southern California contractor, has been elected president of the 1955 Los Angeles Home Show, according to an announcement by Carl Kraatz, executive director. He succeeds Frank E. Hess who directed the show for the past two years.

Huck is past president of the Los Angeles Chapter of the Building Contractors Association and a past exalted ruler of the Elks.

CLAY BRICK AND TILE INDUSTRY HOLD WEST COAST CONFERENCES

One day sales convention's for clay product dealers, salesmen and distributors were held last month in San Francisco and Seattle, Washington, sponsored by the Clay Brick and Tiles Association and the Pacific Northwest Brick and Tile Association, regional affiliates of the Structural Clay Products Institute.

Latest knowledge on the technical progress of clay products and the newest methods of merchandising the products in today's market was discussed by a team of experts.

SEVENTH ANNUAL INDUSTRIAL ENGINEERING INSTITUTE

The Seventh Annual Industrial Engineering Institute will be held on January 28-31 at Los Angeles, and February 1, at Berkeley, according to preliminary announcements.

The program will be devoted to a wide variety of subjects dealing with industry, personnel, methods, engineering and management.

Joseph D. Carrabino, Lecturer in Production Management, University of California at Los Angeles, is the General Chairman.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

TV STATIONS. A Guide for Architects, Engineers and Management. By Walter J. Duschinsky. Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y. Price $12.00.

The first and only book dealing with the planning and design of television stations. Designing for this complex industry involves a complete understanding of program planning and production, of technical operations and administration, and of the problems arising from the use of live talent and film.

This book is useful to architects and engineers because they must understand all the operations of a TV studio in order to plan the building and facilities. TV Stations is useful to management because policy planning is possible only if the whole picture of TV station planning can be recognized. The book is also useful to production men because it indicates the long-range aspects of operating which will ultimately determine production.

Dealing with master planning which precedes construction, and practical problems that arise in the operation of a TV station, the book contains 135 illustrations showing TV equipment of all types, station facilities, and plant layouts. This book fills an increasing need for imaginative, integrated, and functional design in this fast growing industry.

THE MOSCOW KREMLIN—Its History, Architecture, and Art Treasures. By Arthur Voyce. University of California Press, Berkeley 4, California. Price $10.00.

The Moscow Kremlin is one of the most impressive citadels in the world. The battlemented walls, the multicolored towers and steeples, the palaces and cathedrals, together present a diverse but astonishing unity of ancient and modern works.

This first comprehensive, richly illustrated study of the Kremlin in English traces the architectural history of the Kremlin from the first rude wooden palisaded compound to the medieval stone citadel and the principal modern additions, including the Lenin Mausoleum. The Kremlin's unique collection of art treasures, secular and ecclesiastic, is discussed and illustrated in great detail. Also included are biographical sketches of the men and women who have influenced, either directly or indirectly, the development of the art and architecture of the Kremlin. Of special interest is the description of the contributions made by Italian architects in the fifteenth and sixteenth centuries.

This book will be welcomed by art historians, architects, and teachers as well as by the general public.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Standard specification for horizontal, residential type, sliding doors. The Aluminum Window Manufacturers Ass'n has just issued a standard specifications booklet for 1955 on aluminum windows; covers quality of materials, construction, strength of sections, and minimum air infiltration requirements. Specification was developed by the Technical Committee to help specifiers and buyers of horizontal sliding aluminum windows to distinguish between dependable types and the many inferior grades now on the market. Copies are available by writing DEPT-A&E, Aluminum Window Mfgrs Ass'n, 74 Trinity Place, New York, N. Y.

New baseboard convector. A 12-page, 2-color, catalog describing the new Young "Perimaheat" baseboard convector; supplies general description information and provides capacity data, selection procedure, method of installation, roughing-in dimensions and architectural specifications. For free copy write DEPT-A&E, Young Radiator Co., Racine, Wisconsin.

Air conditioning. A completely revised 2-color, 32-page air conditioning catalog; thoroughly covers fan performance data, heating and cooling oil performance, filter data, data on mixing boxes, and physical and dimensional data; other helpful features include typical selection examples which simplify

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Planned plant communications system. New 16-page, 8-color booklet on planned plant communications systems; six basic manufacturing problems are graphically illustrated and analyzed; importance of the proper flow of current information for efficient production as well as management control is discussed; schematic diagrams help clarify problems of interdepartmental communications; communications systems for material handling, production planning, quality control, sales order and maintenance control are described. Proved solutions for the dissemination of information are included with explanation; work in process control, reduction of "down-time," accurate transmission of information between all operating units of office and plant are some of the studies described. Free copy by writing DEPT·A&E, Telautograph Corp., 16 W. 61st St., New York 23, N. Y.

Roof drains. A complete, informative reference (A.I.A. File No. 29) prepared to aid in the specification and installation of roof drains. Of special interest are engineering drawings showing type of drain to use and how to install drains in standard types of roof construction; roof drain outlet and sizing data included; several feature pages devoted to special problems; drains and recommended drain arrangements for open deck parking areas and outdoor recreation terraces. Quick references to easy-to-understand material. Has illustrated index; clear product descriptions and sufficiently large dimensional drawings to provide easy, safe drain selection. Copy free, write DEPT·A&E, J. A. Zurn Mfg. Co., Plumbing Division, Erie, Pa.

"Arislide Steel Sliding Doors." Illustrated 8-page colored catalog (A.I.A. File No. 16-E-1-7-54) gives detailed specifications on smooth operating sliding doors for all types of residential and commercial construction; frames and sliding units of formed steel, corners continuously welded and exposed surface ground; stainless steel capped track, fully weatherstripped. Roller bearing rollers adjustable without removing door frame; equipped with bronze handles and foot bolt; lever latch hardware and cylinder locks also available. Available in 5' to 24' widths, 6'10" heights; special types and sizes furnished to meet individual requirements. For free copy write N. K. Juvet, Manager, Steel Windows Division, Michel & Pfeffer Iron Works, Inc., 212 Shaw Road, South San Francisco.

"The ABC of Home Wiring." Breezy style booklet with numerous imaginative cartoons covering the subject of home wiring. Types of wiring for all kinds of electrical devices, ranging from house lights to electric stoves; tables are provided to calculate wattage, wire sizes, fuse or circuit breaker capacities; and all other electrical requirements; glossary of electrical terms in common use. For free copy write DEPT·A&E, Kennecott Copper Corp., Box 238, New York 46, N. Y.

New translucent fiberglass building panel. A 4-page, color illustrated brochure describing Daycor, the new translucent fiberglass building panel; offers easy reference file-folder form, illustrates many uses as office partitions, shower enclosures, carports, patio covers, awnings; describes photographically how easy it is to install, how it can be sawed, nailed, screwed or drilled like wood, and yet is light-stabilized against fading and will not rot or warp. Obtain free copy by writing DEPT·A&E, Strick Plastics Co., Whitaker & Godfrey Aves, Philadelphia, Pa.

Copper drainage systems. Paul Nankivell, director of sales for Northern Indiana Brass Company, announces publication of a 20-page manual dealing with the workings of a drainage system. The manual is designed for use by those not completely familiar with the advantages, procedures and costs of installing copper drainage systems; gives explanation of purposes and functions of drainage systems; highly illustrated, many tables and charts. Available from DEPT·A&E, The Northern Indiana Brass Co, Elkhart, Ind.

Caring for masonry surfaces. Now available, a new specifications guide for waterproofing, repairs and color coating of concrete and masonry surfaces. Complete data and illustrations graphically describe proper application methods; of special interest to architects, home builders, and maintenance men. A complete above and below grade wall cross section chart shows proper material selection and usage at a glance. Available by writing DEPT·A&E, The Seddon Co, 1526 Wooster Road, Cleveland 16, Ohio.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.62

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet

for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	13/16x2¼ $	½x2 $	¾x2 $	1"x2 $
Clear Otd., White	425	405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
13/16 x 2¼	390.00	381.00
13/16 x 2¾	375.00	355.00
13/16 x 3¼	395.00	375.00
13/16 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

13/16 x 2¼ First Grade	$390.00
13/16 x 2¼ 2nd Grade	365.00
13/16 x 2¼ 2nd & Btr. Grade	375.00
13/16 x 2¼ 3rd Grade	240.00
13/16 x 3¼ 3rd & Btr. Jtd. EM	380.00
13/16 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
1/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
¼ in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
1/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
1/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-515 ..... $135.00
½-inch 4.0x8.0-515 ..... 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard $ .75
Three-coat work	per yard 1.00
Cold water painting	per yard 25c
Whitewashing	per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Raw	Wholesale Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16"..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile
Scored ..... F.O.B. S. F.
12 x 12, each ..... $ .17

Kraftile: Per square foot Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x 7/8-inch, plain	$ .40	$ .36
6 x 12 x 7/8-inch, plain	.44	.39
6 x 6 x 7/8-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., DL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1 2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(13)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

FACTORY ADDITION, Los Angeles. Gilfillan Bros., Inc., Los Angeles, owners. Addition will cover an area of 146x260 ft., excavating, concrete, asphalt concrete paving, miscellaneous metal, structural steel, metal windows and skylights, hollow metal doors and frames, metal rolling doors, metal toilet partitions — $200,000. ARCHITECT: Roy A. Kazebier, Ontario. STRUCTURAL ENGINEER: John J. Driskell, East San Gabriel. GENERAL CONTRACTOR: P. J. Walker Co., Los Angeles.

OFFICE-FACTORY, Los Angeles, Bley Stein Co., Los Angeles, owner. Composition roofing, concrete slab and asphalt tile floors, interior plaster work, suspended gas heaters, tapered steel girders, toilets, skylights, rotary roof ventilators, asphalt parking area, projecting and sliding steel sash; 5400 sq. ft. floor area. ENGINEER: S. L. Pollack, Los Angeles.

RITTER HALL ADD'N, University of California at La Jolla. University of California, owner. 3-story, reinforced concrete addition to Ritter Hall; grading, excavating, concrete slab, asphalt tile and ceramic tile floors, masonry, chalkboards and tackboards, acoustical tile, glass and glazing, composition roofing, steel doors and frames, aluminum windows, metal toilet partitions, Venetian blinds, light proof shades, heating, ventilating and air conditioning, plumbing, electrical work, asphaltic concrete paving—$450,800. ARCHITECT: Frank L. Hope & Associates, San Diego. GENERAL CONTRACTOR: F. E. Young Constn. Co., San Diego.

GARAGE, Los Angeles. 3450 Wilshire Corpn., Los Angeles, owner. 1-story reinforced concrete garage building containing 388x285 ft. in area. ARCHITECT: Albert C. Martin & Associates, Architects & Engineers. Los Angeles. GENERAL CONTRACTOR: C. L. Peck, Los Angeles.

SKATING RINK, West Covina, Los Angeles county. S. B. Hutton, Baldwin Park, owner. Composition roofing, steel sash, masonry planter, asphalt and plastic rink floor, other floors concrete slab, snack bar, forced air heating, lounge room, skate storage room, toilet facilities, paved parking area; 13,200 sq. ft. floor area—$40,000. ENGINEER: Francis H. Jane, Bell. GENERAL CONTRACTOR: Sharpe & Ireland, Running Springs.

CITY HALL, San Fernando, Los Angeles county. City of San Fernando, owner. Reinforced brick, 1-story with 10,000 sq. ft.

floor area, composition roofing, concrete slab, asphalt tile floors, metal sash, air conditioning, mechanical equipment in basement, plastic wainscoting, glass partitions, toilet rooms, asphalt concrete pavement—$178,200. ARCHITECT: Breo Freeman, Pasadena. GENERAL CONTRACTOR: Williamson Bros., Pacoima.

DEPARTMENT STORE, Palo Alto, Santa Clara county. The Emporium Co., San Francisco, owner. 2-story and basement, reinforced concrete—$2,750,000. ARCHITECT: Welton Becket & Associates, San Francisco. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

LEMON STORAGE BLDG., Oxnard, Ventura county. Santa Clara Lemon Association, Oxnard, owner. New storage building containing 87,000 sq. ft. of floor area; frame and stucco exterior, raised cement and asphaltic floor slab, gypsum board firewalls, wood posts, steel for laminated beams, insulation board interior ceilings and walls, built-up asbestos roofing, electrical work. ARCHITECT: William Ache, Los Angeles. GENERAL CONTRACTOR: Wohl-Calhoun Co., Los Angeles.

FELLOWSHIP HALL, Modesto, Stanislaus county. Geneva Presbyterian Church, Modesto, owner. Frame and stucco construction, $45,500. ARCHITECT: John W. Bomberger, Modesto. GENERAL CONTRACTOR: Hubbard & Son, Turlock.

SERVICE STATION, Fairfield, Solano county. Menlo Oil Co., owner. 1 story

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.975	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

CLASSIFIED ADVERTISING

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ARCHITECTURAL SLIDING STEEL SASH, One lot only — new, half price. 13 units, assorted sizes, 353 square feet total. 3 at 7 ft. x 5 ft.; 4 at 7 ft. x 4½ ft.; 1 at 6 ft. x 4½ ft.; 2 at 6 ft. x 4 ft.; 1 at 7 ft. x 3½ ft.; 1 at 4½ ft. x 3 ft.; 1 at 3 ft. x 3 ft. Phone DElaware 3-7378, San Francisco.

COLLECTIONS—Thoroughly experienced in all phases of the collection business; your interests protected at all times; bonded agents everywhere; no collection no charge; California Material Dealers Service Co., 925 Hearst Bldg., San Francisco. Ernest T. Langley, Manager.

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POSITION AVAILABLE: Civil Engineer, Structural Engineering Branch, for Architectural and Engineering Office with at least three years experience designing to Code requirements. Write 9025 Santa Monica Blvd., Beverly Hills, Calif.

PLEASANT ARCHITECT, completely experienced, young, desires responsible position with firm leading to purchase of interest. Box 529, ARCHITECT & ENGINER, 68 Post Street, San Francisco, California.

EXPERIENCED aggressive young architect wanted by major manufacturer of multiple story building material to handle sales contacts. Opportunity commensurate with ability. Write Box No. 527, Architect and Engineer, 68 Post St., San Francisco 4, Calif.

YOUNG ARCHITECT seeks permanent association in Bay Area. A.I.A., N.C.A.R.B., M. Arch. M.I.T., B.S. Univ. of Illinois, Designer with engineering background, winner in national competition, 12 years varied experience and private practice. Reply, Box 526, Architect & Engineer, Inc., 68 Post St., San Francisco 3, California.

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RENTAL—$175.00 Mo. 400 sq. ft. office space, 300 sq. ft. warehouse space, parking area. Suitable for factory distributor. Write or phone Mr. Dillon, 252-12th St., San Francisco, HEmlock 1-3943.

steel construction, $25,000. ARCHITECT: Harry A. Bruno, Oakland. GENERAL CONTRACTOR: C. Norman Peterson, Berkeley.

HEALTH CENTER, County Hospital, Sacramento. County of Sacramento, owner. 1-story reinforced concrete construction, metal partitions, asphalt tile floors, $410,000. GENERAL CONTRACTOR: Fred J. Chapek, Sacramento.

HIGH SCHOOL BLDGS., Ambrose High School, West Pittsburg, Contra Costa county. Mt. Diablo Unified School District, Concord, owner. 1-story frame and stucco construction, 65,000 sq. ft. floor space; provide facilities for administration room, 11 classrooms, home making, two shop buildings, arts and crafts, speech, music, gymnasium, shower and locker rooms for boys and girls, toilet rooms, $1,079,900. ARCHITECT: Anderson & Simonds, Reynolds & Chamberlain, Confer & Willis & John Lyon Reid, Oakland. GENERAL CONTRACTOR: California Builders Co., Oakland.

RICE MILL, warehouse and office, West Sacramento, Yolo county. Farmers Rice Growers Co-Operative, San Francisco, owner. Rice Mill 60x110x96 ft. high, reinforced concrete construction; warehouse and office, Tilt-up concrete construction, wood roof, 100x160 feet of area, $1,200,000. ENGINEER: MacDonald Engineering Co., San Francisco. GENERAL CONTRACTOR: MacDonald Engineering Co., San Francisco.

DRESSING ROOMS, Fresno and Roosevelt High Schools, Fresno. Fresno Unified School District, Fresno, owner. Facilities for swimming pools, $111,081. ARCHITECT: Alastair Simpson, Fresno. GENERAL CONTRACTOR: Hopkins & Son, Fresno.

PAROCHIAL SCHOOL, Holy Angels, Yuba City, Sutter county. Roman Catholic Diocese, Sacramento, owner. 1-story concrete floors, unit heaters, asphalt tile floors 14,000 sq. ft. floor area, $139,173. ARCHITECT: Barevetto & Thomas, Sacramento. GENERAL CONTRACTOR: McDaniel Const., Marysville.

STORE BLDG., Eugene, Oregon. Eugene Investment Co., owner. 3-story and basement, reinforced concrete construction, plate glass front, elevator, $750,000. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

ELEMENTARY SCHOOL ADDN, John L. Shearer School, Napa. Napa Elementary School District, Napa, owner. Facilities for 6 classrooms, 2 kindergartens, toilet rooms; strescrete, structural steel frame, Robertson roof steel decking, insulation, concrete floors, radiant heating, $182,517. ARCHITECT: Donald S. Mackey, Oakland. GENERAL CONTRACTOR: A. A. Douglas, Napa.

GYMNASIUM BLDG., Lincoln Elementary School, Taft, Kern county. Taft Elementary School District, Taft, owner. Frame and stucco construction, laminated roof truss, folding bleachers, 15,720 sq. ft. floor area, $195,700. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: William K. Michael, Bakersfield.

PROFESSIONAL BLDG., Menlo Park, San Mateo county. Longson c/o Architect, owner. 1-story brick and frame construction, shake roof, asphalt tile floors, $39,463. ARCHITECT: Leslie I. Nichols, Palo Alto. GENERAL CONTRACTOR: Arthur Bros., San Mateo.

COMMUNITY CENTER MULTI-PURPOSE BLDG., San Rafael, Marin county. Marin Jewish Community Center, San Rafael, owner. 1-story structural steel frame, block walls, plate glass, $44,606. ARCHITECT: Irvin W. Goldstine, San Francisco. GENERAL CONTRACTOR: Balliet Bros. Constn., San Francisco.

CAMPUS CENTER BLDG. and LIBRARY BLDG., Bakersfield College, Bakersfield, Kern county. Kern County Union High School District, Bakersfield, owner. Reinforced concrete, composition roofing, concrete and asphalt tile floors, ceramic tile veneer, insulation, structural steel metal sash, $1,023,000. ARCHITECT: Wright, Metcalf & Parsons, Bakersfield. GENERAL CONTRACTOR: James I. Barnes Constrn., Redwood City.

TELEPHONE EXCHANGE, Empire, Sacramento. Pacific Telephone & Telegraph Co., San Francisco, owner. 1-story reinforced concrete construction, 62x70 ft. of area. GENERAL CONTRACTOR: Campbell Constn., Sacramento.

FACTORY, Burlingame, San Mateo county. Guitard Chocolate Co., San Francisco, owner. 1-story reinforced concrete tilt-up construction, wood roof trusses and wood roof, sprinkler system, $300,00. ARCHITECT: J. Frances Ward, San Francisco. GENERAL CONTRACTOR: Cahill Constn., San Francisco.

SWIMMING POOL. Covington School, Los Altos, Santa Clara county. Los Altos Elementary School District, Los Altos, owner. Reinforced concrete construction, $51,981. STRUCTURAL ENGINEER: August E. Waegemann, San Francisco. GENERAL CONTRACTOR: Lew Jones Constn. Co., San Jose.

BANK BLDG., Los Gatos, Santa Clara county. American Trust Co., San Francisco, owner. 1 story and basement, structural steel, reinforced concrete and brick, plate glass front, marble lobby, 66x92 ft. in area. ARCHITECT: Warnecke & Warnecke, Oakland. GENERAL CONTRACTOR: O. E. Anderson, San Jose.

OFFICE & WAREHOUSE, Salinas, Monterey county. Kuhlman Electric Co., owner. 1 story reinforced concrete tilt-up construction, wood roof, steel sash, composition roofing, 15,000 sq. ft. floor space, $75,000. STRUCTURAL ENGINEER: Simpson & Stratta, San Francisco. GENERAL CONTRACTOR: Johnson & Mape Construction Co., Santa Cruz.

COLLEGE BLDGS., Visalia, Tulare county. Sequoia Jr. College District, Visalia, owner. Reinforced concrete with structural steel frame Science Wing and Fine Arts building addition to the College of Sequoias; gypsum roof, concrete and asphalt tile floors, air conditioning, $225,000. ARCHITECT: Robert Kaestner, Visalia. GENERAL CONTRACTOR: Floyd G. Borchardt, Stockton.

ELKS CLUB BLDG., Walnut Creek, Contra Costa county. Elks Hall Association No. 1811, Walnut Creek, owner. 1-story with part basement, structural steel frame, frame and stucco construction, 6,000 sq. ft. floor space, $59,533. ARCHITECT: Harry K. Nakahara, Martinez. GENERAL CONTRACTOR: Romley Constn. Co., Walnut Creek.

DRUG STORE and SHOPS, Manchester Shopping Center, Fresno county. Owner c/o Architect. Drug store 63x140 ft.; shops 60x160 ft.; concrete block and structural steel columns, mosaic tile veneer, porcelain enamel panels, plate glass, acoustical tile, terrazzo, asphalt tile floors, glass doors, air conditioning, $216,950. ARCHITECT: C. L. Maston, Los Angeles. GENERAL CONTRACTOR: Harris Constn. Co., Fresno.

Y.M.C.A. BLDG., Redwood City, San Mateo county. Y.M.C.A., Redwood City, owner. 1-story reinforced concrete and frame construction; gymnasium, offices, meeting room, activity rooms, 16,000 sq. ft. floor area, $150,000. ARCHITECT: Edwin Wadsworth, Woodside. GENERAL CONTRACTOR: Lindley Constn. Co., Atherton.

CARBON DIOXIDE PLANT, Oakland, Alameda county. Liquid Carbonic Corpn., San Francisco, owner. Reinforced concrete and structural steel construction; steel sash, steel roof trusses, composition roofing, $1,500,000. ENGINEER: C. F. Braun, Alhambra. GENERAL CONTRACTOR: C. F. Braun, Alhambra.

SHOPPING CENTER, San Jose, Santa Clara county. Lo Bue Packing Co., owner. 1-story frame and stucco construction, plate glass front, structural steel tower, some concrete block, 38,000 sq. ft. floor area, $302,000. ARCHITECT: Allean M. Walter & Associates, San Jose. GENERAL CONTRACTOR: George Bianchi, San Jose.

WAREHOUSE, San Francisco. Grosjean Investment Co., San Francisco, owner. 2-story, class 3, reinforced concrete construction, $500,000. GENERAL CONTRACTOR: Wagner & Martinez, San Francisco.

PAROCHIAL SCHOOL, Our Lady of Mercy Parish, Westlake, San Mateo county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 2-story reinforced concrete, lift slab and tilt-up construction, 12,000 sq. ft. of floor space, $168,000. ARCHITECT: Vincent G. Raney, San Francisco. GENERAL CONTRACTOR: W. A. Moroney, Burlingame.

SHOPPING CENTER, Sacramento. Arden Plaza Shopping Center, Sacramento, owner. 1-story super-market and sixteen stores; reinforced concrete, tilt up construction; wood roof, composition roofing,

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plate glass, stone and brick veneer fronts; 46,000 sq. ft. floor area, $450,000. STRUCTURAL ENGINEER: Cline & Zerkle, Berkeley. GENERAL CONTRACTOR: Erickson Constn. Co., North Sacramento.

MEDICAL BLDG., Los Angeles, Dr. James Peacock, Los Angeles, owner. 1-story, five suite, frame and stucco construction, composition roofing, plate glass windows and projecting steel sash, concrete slab floor, carpet and asphalt tile covering, air conditioning, exposed beams, electrical work, painting, plumbing, 5,280 sq. ft. floor area. ENGINEER: Frank M. Drake, Whittier; Paul B. Clayton, Maywood. GENERAL CONTRACTOR: E. & T. Constn., Inglewood.

IN THE NEWS

NEW FIRE STATION

Architects Butcher & Lillis of Vallejo, are completing plans for construction of a new firehouse building for the City of Vallejo.

The new building will be of frame and stucco construction.

ARCHITECTURAL FIRM CHANGES ITS NAME

The firm of Marsh, Smith & Powell, architects and engineers, announced a change in the name of the organization as of January 1, 1955.

In the future it will be known as Smith, Powell & Morgridge, Architects and Engineers. Offices are located at 208 West Eighth Street, Los Angeles 14.

PORCELAIN ENAMEL SCHEDULE MEETINGS

John C. Oliver, secretary of the Porcelain Enamel Institute, has announced a Pacific Coast Conference of the Institute would be held at the Biltmore Hotel in Los Angeles on March 10-11; the Mid-Year Division Conference will be held May 18-20, at Chicago; the 17th Annual Shop Practice Forum is scheduled for September 14-16 at Columbus, Ohio; and the Institute's 24th Annual Meeting will be held October 26-28 at White Sulphur Springs, W. Va.

ARCHITECT MOVES OFFICE

The firm of Donald Powers Smith, Architect, has moved into new offices at 133 Kearney Street, San Francisco. Former offices were at 583 Market Street, San Francisco.

CO-OPERATIVE LABORATORY

Architect John W. Bomerger of Modesto, is completing drawings for the construction of a one-story concrete block and frame laboratory, office and service building for the Turlock Co-Operative Growers of Modesto.

The new building site is on the Oakdale-Salada highway.

PAROCHIAL SCHOOL

Architect Paul C. Shattuck of Merced, is working on plans for construction of a concrete and frame, tile roof, parochial school to be built in Merced county by the Fresno-Monterey Roman Catholic Diocese.

The new school building will comprise 9-classrooms, multi-purpose room, kitchen, chapel, and toilet rooms.

VETERANS MEMORIAL

Architects Clark & Stromquist of Palo Alto have been commissoned by the city of Redwood City to design and supervise construction of a new Veterans Memorial Building to be built in Redwood City.

RESEARCH LABORATORY

Architect Gerald McCue of Berkeley is completing drawings for construction of an addition to the California Research Laboratory building of the Standard Oil Company in Richmond.

The new wing will comprise facilities for chemical laboratories and engineering office and will be of 2-story reinforced concrete construction comprising 33,000 sq. ft. of floor area. Provision is being made for the addition of an additional floor at a future time.

MEDICAL CLINIC

Architect J. Clarence Felciano of Santa Rosa, is completing plans for construction of a Clinic Building for the Santa Rosa Clinic to be built in the City of Santa Rosa.

The new building will be of 2-story frame and stucco construction and will cost an estimated $350,000.

CHURCH ARCHITECT

Architect Donald Powers Smith, San Francisco, and Chester H. Treichel, associate architect of Oakland, have been selected to design a new Church building and facilities for the Trinity Episcopal Church of Hayward.

ARCHITECT SELECTED

Architect Harry J. Devine of Sacramento, has been commissioned by the Modesto Unified School District to design a new auditorium and music building for the Downey High School, and a girls gymnasium for the Modesto High School.

FEDERAL FUNDS ALLOCATED

Federal funds have been allocated and preliminary sketches prepared by architects Warnecke & Warnerke of Oakland, for construction of a new Washington

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Elementary School in the City of Alameda.

The new school building will comprise 20-classrooms, an administration office, library, music room, cafetorium and toilet facilities.

SAN MATEO OFFICE

A zoning permit has been granted to the Fifth Avenue Corpn, San Francisco, for construction of a $12,000,000 office building project in the City of San Mateo.

Five buildings up to 6 stories, plus a garage for 500 automobiles, a swimming pool and other facilities are included in the project.

John W. Glee, San Francisco is the architect.

APPOINTED KAISERS CHIEF METALLURGIST

Richard T. Myer has been appointed chief metallurgist of the aluminum fabrication division of Kaiser Aluminum & Chemical Corp. with offices in Oakland.

In his newly created position Myer will coordinate metallurgical activities of Kaiser's expanding fabrication division which includes sheet, plate, extrusion, rod, bar and wire, foil and forging production facilities, in providing technical assistance to industrial users.

Myer was formerly chief metallurgist of the Goodyear Aircraft Corp.

ARCHITECT SELECTED

The architectural firm of Loubet & Glynn, San Francisco, has been commissioned by Sears, Roebuck & Company of Los Angeles, to design a new department store building to be constructed in the City of Santa Clara.

Estimated cost of the project is $2,500,000.

EARTHQUAKE DAMAGE REPAIR

Architect Gerald Matson of Eureka has been commissioned by the Eureka Unified School District of Eureka, to draft plans for remodeling the city's senior and junior high schools which were recently damaged by a severe earthquake.

SWIMMING POOL BATH HOUSE

Architect L. F. Richards of Santa Clara is completing plans for construction of new swimming pool and bath house to be constructed in Washington Park, Sunnyvale, for the City of Sunnyvale.

Estimated cost of the project is $100,000.

OFFICE RENO

The Washoe Title Insurance Company of Reno, Nevada, will remodel their office building in Reno, according to a recent announcement.

Remodel and modernization will include interior and exterior work, estimated to cost $100,000.

Ferris & Erskine, Architects, Reno, are completing plans.

PORT GRAIN ELEVATOR

Stockton Elevators Inc., recently announced plans have been completed for construction of a new grain elevator plant at the Port of Stockton.

Construction will include a 50x50 Head House 240 feet high of reinforced concrete; eighteen reinforced concrete silos, and 400 ft. of docks equipped with a grain conveyor system.

Estimated cost is $1,600,000 according to Marchall Barr & Associates, engineers of Seattle, Washington.

NEW MOTEL IN SAN FRANCISCO

The architectural firm of Stone & Mulloy & Marraccini & Patterson, San Francisco, has completed plans for construction of a 20-unit Motel building in downtown San Francisco for J. A. Graham.

Estimated cost of the two-story building is $75,000.

NEW SHOPPING CENTER

David G. Bohannon, San Mateo builder, has been granted a permit to construct 5-store buildings, providing facilities for 49 individual stores, in the Hillsdale Shopping Center near San Mateo.

The buildings will be 2-stories in height and will contain 260,000 sq. ft. of floor area. Estimated cost is $1,490,000.

ARCHITECT SELECTED

Architect Henry Hill of San Francisco has been commissioned by the I.L.W.U. of San Francisco, to prepare plans and specifications for construction of a union building in San Francisco at an estimated cost of $600,000.

PALO ALTO OFFICE

Scott Forman Company of San Francisco will construct a new office building

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John S. Bolles, San Francisco, is the Architect.

MORTUARY BUILDING

The architectural firm of Rickey & Brooks, Sacramento, have completed drawings for construction of a Mortuary Building on Stockton Blvd. and Lemon Hill Road in Sacramento county, for Sacramento Memorial Lawn.

The building will be of frame and stucco construction, with laminated wood roof arches, and will cost an estimated $200,000.

ARCHITECT SELECTED

Architect J. S. Gould of San Francisco has been commissioned by the Department of Public Works of the City and County of San Francisco, to design a new Fire House for the city's fire department.

ASSUMES NEW JOB

C. J. Haglund is now vice-president and manager of the west coast operations of the H. K. Ferguson Company, specialists in large scale industrial engineering and plant erection projects.

PRE-STRESSED STAIRWAY

The first pre-stressed concrete stairway in Australia, and possibly the largest of its kind in the world, is now being built in Sydney, New South Wales. It is being erected to provide access to the upper floors at a new office block. The designing engineer believes that there are only three similar pre-stressed concrete staircases in the world; one in France and two in Italy.

The pre-stressed spiral beam rises 13 feet between the ground and first floor, and 12 feet between the first and second floors. The weight of the stairway, including treads, is about eight tons.

Treads are to cantilever out from each side of the beam and are 5 feet 6 inches wide.

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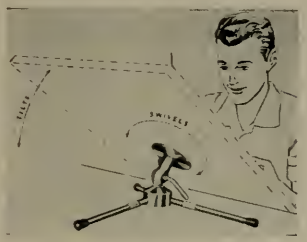

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NAMED VICE PRESIDENT OF SHANA MANUFACTURING

J. Austin Miller has been appointed vice-president in charge of Franchises & Sales of the Shana Manufacturing Company, according to a recent announcement by Harry G. Shaffer, president of the firm. General offices are located in Chicago, Ill.

SCHLAGE LOCK CO. OFFERS NEW LINE

Five new lock and escutcheon designs for residential or commercial use have been announced by the Schlage Lock Company of San Francisco.

Featured among new designs is the 5½" x 5½" Imperial escutcheon, a handsomely-fashioned concave square escutcheon. A smaller and similar design is available for general use throughout any structure, thus the entrance door theme may be used entirely creating a custom-made effect.

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shape appearance, or may be combined and varied in a number of ways to personalize the structure and add unique accents to architectural motives. Complete information on these additions to their line is obtainable from the Schlage Lock Company, San Francisco.

ARCHITECT SELECTED

Architect Edward D. Cerruti of Oakland, has been commissioned by the Alameda county Board of Supervisors to draft plans for construction of a new County Office building to be built in the city of Hayward.

Estimated cost of the work is $800,000.

LOS ALTOS HIGH SCHOOL

Architects Clark & Stromquist of Palo Alto are preparing plans for construction of a frame and stucco addition to the Los Altos High School, consisting of classrooms, science room, boys gymnasium and toilet rooms.

Estimated cost of the project is $436,000.

AIRMEN'S DORMITORIES

The Corps of Engineers, San Francisco offices, announced recently the government would start immediate work on construction of 2 airmen's dormitories at the Stead Air Force Base which is located near Reno, Nevada.

The buildings will be 2-story, wood frame construction, 224 x 36 feet, and will cost about $299,680.

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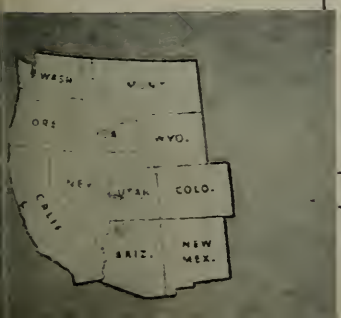

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Take a little time—look around you and see the many examples of beautiful architecture in your community.

* * *

Over one-half the nation's population enjoys the convenience of automatic heating with oil, either at home, at work, at school, or at church.

* *

A REAL GIVE-AWAY

Among the interesting facts developed in connection with the Dixon-Yates power controversy, is the illuminating breakdown of "additional costs" advocates of the project contend would be necessary if the power development is done by private power company.

Of the $3,685,000 added costs between federal and private operation, it is interesting to note that private industry would have a State and local tax bill of $1,499,000, an item which the government will not have to pay; an interest on investment charge of $1,059,000 MORE than interest charges paid by the government on the same invested capital; and $1,127,000 higher operating and transmission costs.

However, as the above figures are "estimates" of cost, let's take a look at some actual costs in connection with the TVA power project.

Up to June 30, 1952, the federal investment in TVA was $1,322,021,000, and the total interest paid at Treasury rates on funds invested in TVA water power was $232,920,000. If the amount of federal investment was charged the same rate as private industry, an additional interest rate of $284,457,000 would have to be paid.

The total State and local taxes paid by TVA were $26,172,000, while private industry would have paid $372,619,000 in State and local taxes on the same operation, and in the actual operation of the project the TVA receives a net operational advantage of one kind and another over private industry amounting to $30,359,000.

Thus in the cost consideration TVA escapes a considerable amount of State and local taxes, gets substantial reductions and advantages in interest on investment, and enjoys many escapes in operational detail and maintenance.

Looking at the income, or sale of power, TVA gets a return of $589,808,000, and if you are fast at figures you can see this is 49 per cent less than is required to make it a break-even operation, provided the property was conducted on an equal basis with free enterprise.

So, what of the "low power rates," and the almost 50 per cent deficit—it is just a "give-away," with the lowly taxpayer being assessed that much more to "make up the difference."

We in the West should be vitally interested in this divergence of opinion in power costs and power control. Any way the problem is approached it is going to cost the ultimate power user money; perhaps the major consideration should resolve itself down to which is the easier to control—government or private industry?

* * *

Fringe benefits to employees were twice as high in 1953 as in 1947—in dollars per year per employee they were $422 in 1947 and $817 in 1953.

* *

HOME IMPROVEMENT LOAN

A hidden boom has been disclosed in a study by the U. S. Census Bureau.

The study indicates that home makers are actually spending twice as much as previously estimated for maintenance and improvements, and the previous estimates have been at an all time high.

The Bureau's study covers the first five months of 1954. In that period home owners spent about $3 billion to maintain or improve their homes.

At that rate, homeowners' expenditures for the full year total about $8 billion, experts say.

A study of the survey leads to the conclusion that expenditures on existing homes probably equal those for new homes, at least it represents a tremendous market for new building materials and modern architectural talent.

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, presents a variety of exhibitions and special events for the month of February, including:

EXHIBITS: Opening of the new wing of the museum which will feature the Samuel H. Kress Collection; San Francisco Art Association Group Show, Number 3, showing the work of Nancy Thompson Genn, Karl Kasten and Steffen Novak; Trends in Contemporary Italian Art, a group of paintings from the Galleria Dell'Obelisco of Rome, Italy; Thonet Furniture; Art in Science, featuring a collection of original cover paintings for Scientific American magazine; Contemporary Ethiopian Paintings; Gouache Paintings, by H. R. H. Prince Eugen of Sweden, 1865-1947; and an exhibit of Jewelry and Metalwork by Victor Ries, and Wood Sculpture by Ding.

EVENTS: A series of special lectures will include discussions on "Swedish Crafts and Customs," "The Samuel H. Kress Collection." Classes in the enjoyment of art for adults include "painting for pleasure," exercises in perception, and Classes for the Children in Picture Making, Art and Nature, and the Art Club.

The museum is open daily 10 a.m. to 5 p.m. No admission.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an Exhibition of Handwoven Textiles by ten artists, together with Lithographs and Silk Screen Prints, by English, French, Italian and twenty-eight Pacific Coast artists during February.

The Pictures of the Month shown in the Little Gallery will feature Watercolors by Alexandra Bradshaw.

TOUR DE DECORS NOW SCHEDULED FOR FALL

San Francisco's flair for sophisticated living will be on exhibit during the week of November 7, when outstanding Bay Area decorators will show their conceptions of smart and arresting room decors for the "Tour de Decors," an event being sponsored by the Women's Board of the San Francisco Museum of Art in conjunc-

SAN FRANCISCO MUSEUM OF ART
WAR MEMORIAL BUILDING, CIVIC CENTER

VASE, PALETTE and MANDOLIN
oil, 32 x 38"
By
Georges Braque

Collection of the San Francisco Museum of Art, gift of W. C. Crocker.

tion with observance of the museum's 20th anniversary year.

Throughout this week original gowns from San Francisco's smartest shops, selected for their fashion and their suitability to the various rooms, will be modeled by women prominent in the city's social life. An additional attraction of "Tour de Decors" will be table settings created by well known hostesses noted for their originality and taste.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace McCann Morley, has arranged a special group of exhibitions and a number of special events in conjunction with the observation of the museum's 20th anniversary.

EXHIBITIONS: Highlight of the month's exhibits is a "20th Anniversary Exhibition," featuring the Museum's Collections; Collections of Modern Art in the Bay Area; Japanese Architecture and the Japanese Tradition.

EVENTS: Include Concerts (every other Wednesday evening); "Folk Fashions," presented by the San Francisco Women Artists with the Sherry Players, Thursday, February 24th; Lecture Tours each Sunday afternoon at 3 p.m.; Gallery Tours each Wednesday evening at 8:30 p.m.; Lecture-Film Series entitled "Man and Art"; and the Classes in Art featuring the Sketch Club and Painting Class and the classes for children each Saturday morning at 10 o'clock.

The museum will observe holiday hours on Lincoln's Birthday, Saturday, February 12, and Washington's Birthday, February 22nd—1 to 5 p.m.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., announces the following exhibitions and special events for February:

EXHIBITIONS: New Installation of French Paintings, from the museum's permanent collections; Rubbings from the Monuments of Palenque, by Robert Lindsley and Moreno de la Rosa; Pre-Columbian Mexican Sculpture, from San Francisco collection; People in Black and White, a group of drawings by Leonard Breger; Two-Dimensional Sculpture, by Everett Turner; Paintings by Peter Shoemaker; Paintings by Thomas Fransioli; and Montici Intarsia, designed by American and Italian artists.

The Achenbach Foundation for Graphic Arts will show Cliches-Verre, an experiment by artists of the Bardizon School; Dutch Genre Prints showing scenes of everyday life by seventeenth century masters; and Prints in Retrospect.

EVENTS: Include an Organ Program each Saturday and Sunday at 3 p.m.; the Motion Picture Series, Saturdays at 2:30 p.m.; and the Educational Activities, which include Art Classes for the children each Saturday morning.

The museum is open daily 10 a.m. to 5 p.m. No admission charge.

CALIFORNIA DESIGNED HOME FURNISHINGS SEEN NATIONALLY

The Municipal Art Center in Long Beach, and the M. H. deYoung Memorial Museum in San Francisco announced a juried exhibition of California home furnishings to which all California designer-craftsmen and manufacturers have been invited to submit entries.

The "California Designed" exhibit will run simultaneous at the deYoung Museum and at the Long Beach Art Center for a month early in July.

Subsequently a substantial selection from the exhibitions will be circulated nationally by the American Federation of Arts.

The display will include furniture, floor coverings, sheer fabrics, drapery fabrics, upholstery fabrics, wall coverings, lamps, accessories, tablewares and home appliances. Entries must consist of finished products that are available in reasonable quantity.

JAPANESE ARCHITECTURE AND JAPANESE TRADITION

In conjunction with the San Francisco Museum of Art, 20th Anniversary year, a special exhibition is being shown entitled "Japanese Architecture and the Japanese Tradition."

The art and architecture of Japan have traditionally interested artists and architects of other nations, and the expression of the interest has been particularly strong in architecture and interior decoration, especially on the West Coast.

One part of the exhibition consists of a number of panels of photographic enlargements and architectural drawings of a number of important examples of Japanese architecture, such as religious shrines, palaces, tea houses, gardens, and contemporary architecture. This material was prepared under the International Program of the Museum of Modern Art, in New York through the Japanese Consulate in New York in cooperation with the Japanese Foreign Ministry and Kukusai Bunka Shinkokai, the Society for International Cultural Relations in Tokyo.

To this material, the Museum is adding various examples of the application of the principles of Japanese design.

BUILDING WITH THE WEST

TECHNICALLY SPEAKING

WOODWORK INSTITUTE OF CALIFORNIA

In accordance with the policy of providing essential data for the architectural and engineering profession, the Woodwork Institute of California herewith presents a table of nominal and net finish sizes of lumber. Your attention is invited to the fact that certain allowances are necessary for surfacing rough lumber from its nominal dimensions to net finish sizes, either in S4S or moulding patterns. When design dimensions are coordinated with the maximum net finish sizes, full economy can properly be effected for the client, and a minimum amount of wood will be wasted in moulding it to shape.

	FINISH GRADES								
	Douglas Fir Hemlock		Redwood		Pond. Pine Sugar Pine White Fir		Hardwoods		
Nom. Rough Inches	Thick Inches	Width Inches	Thick Inches	Width Inches	Thick Inches	Width Inches	Thick Inches	Width Inches	Nom. Rough Inches
1	25/32		25/32		25/32		25/32		1
1¼	1 1/16		1 1/16		1 5/32		1 1/16		1¼
1½	1 5/16		1 5/16		1 13/32		1 5/16		1½
2	1 5/8	1 5/8	1¾	1¾	1 13/16	1 5/8	1 5/8	1 5/8	2
3	2 5/8	2 5/8	2 5/8	2 5/8	2¾	2 5/8	2 5/8	2 5/8	3
4	3½	3½	3½	3½	3¾	3 5/8		3 5/8	4
5	4½	4½	4½	4½		4 5/8		4 5/8	5
6	5½	5½	5½	5½		5 5/8		5 5/8	6
8	7¼	7¼	7¼	7¼		7 5/8		7½	8
10	9¼	9¼	9¼	9¼		9 5/8		9½	10
12	11¼	11¼	11¼	11¼		11 5/8		11½	12
OVER 12"	1"Off	1"Off				3/8"Off		5/8"Off	OVER 12"

Closely related to the designation of finish lumber sizes is the specification of moisture content. The moisture content of 2" thick, or thinner, finish lumber will properly vary from six to fifteen per cent, depending on the atmospheric conditions existing in the locality in which the material is to be installed. It is pointed out that the moisture content will in fact vary between the two extremes, depending on the humidity and temperature of its environment. Wood in its raw state, or even with an applied finish, will give off or absorb moisture until it reaches a state of equilibrium with the atmosphere. The moisture content of lumber cannot then logically be exactly specified, since the atmospheric condition is not uniform throughout any region, nor does it remain constant in any locality.

It is felt that the determination of the proper moisture content requirements should be a matter for the judgment of the experienced manufacturer who has been supplying the area over an extended period of time. The specification writer should limit his specifications to a description of the condition of the finished product, rather than defining a specific percentage of moisture content, and the architect should then attempt to insure that an experienced and competent manufacturer is charged with the moisture content qualifications.

EXTERIOR VIEW OF THE KITCHEN WING . . . Apartment below.

BERKELEY HILLS
RESIDENCE

For Mr. and Mrs. L. E. Davis

BERKELEY, CALIFORNIA

JULIAN FORD TAYLOR, Designer

WALTER STEILBERG, Consulting Engineer

THE PROBLEM

Site: Under consideration was an undeveloped up-hill wooded residential site which faced the San Francisco Bay and the Golden Gate to the West, with the South sun exposure rather cut-off by an adjoining tall residence.

A drive-way between this large home and the property to the North gave logical access to the site, thus establishing the general location of the garage.

The site sloped upward to a more level area which suggested the possible use of two levels in the new home. The rear of the house could open easily onto the upper level and into a group of redwood trees, an area easily converted into wanted phases of outdoor living.

EXTERIOR

View showing Staircase from entry to main living level.

VIEW OF ENTRY . . . to stairwell

REQUIREMENTS

The owners of the new home would require:

Two Living Rooms

One Formal, One Informal

The informal living room to be available for use as a multi-purpose family room where meals are generally served.

Kitchen

So placed as to serve both living room areas.

BELOW is view of LIVING ROOM—looking to kitchen and Lanai directly ahead

The two living rooms and the kitchen are located on the upper house level, as are

3 Bedrooms

2 Baths

1 Dressing Room

A large deck, on the sunny side of the house, joins the kitchen and family living room to the upper level area of the property.

Meals are served on the deck much of the year because of the mild climate.

A sun-trap has been created by pulling out the kitchen wing as a protection from the west and north winds.

The main wing room opens upon a deck created by the roof of the garage.

This area provides for a spacious apartment to be used by house guests. The area under the kitchen wing allowed for a sitting-bedroom, a bath, the family laundry and a general utility room.

A central stairwell, a usual feature in the designer's planning, connects the entry, the garage, the apartment and the utility room to the upper house level, thus eliminating a lot of wasted space in halls.

The upper circulation is so arranged that the growing children and the parents both can enjoy their friends without interfering with each other by merely closing the doors between the family room and the main living room.

A VIEW from the Lanai—looking into the living room

HILLSIDE RESIDENCE . . .

Mr. L. E. Davis, the client, a professor of engineering at the University of California, was mainly interested in the construction of a structure that would require a minimum of upkeep.

Therefore, wood was predominantly used throughout, with resin finishes.

It being the second house that Julian Ford Taylor had designed for the Davis', the first also of contemporary design with large glass areas which were to be avoided in the new home, it was easy for the designer and owner to understand construction planning which would create an entirely new feeling from the previously designed home.

The results indicate the complete desires of the owners have been well accomplished.

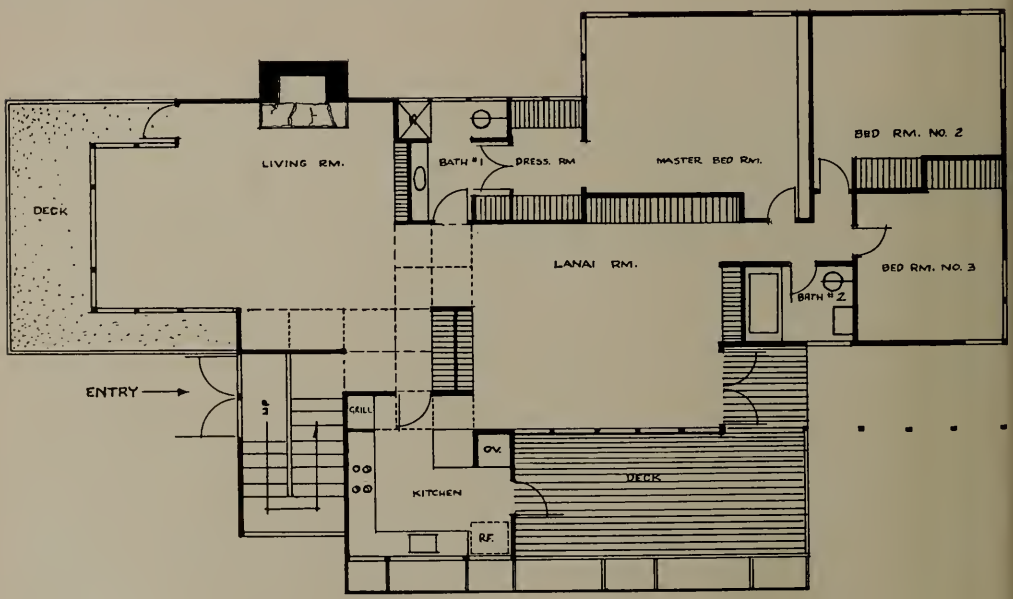
CONSTRUCTION DATA

The general type of construction is post and beam exposed ceiling.

The exterior walls are panels filled with plywood and resawn t. and g.

The interior walls are plywood with the exception of the living room which has been done in grass cloth.

PLAN



Floors are oak, with the exception of the kitchen and bathrooms. Italian quarry tile has been used in the bathrooms and cork tile flooring has been placed in the kitchen.

The roof is of cedar shingles, with insulation over rafters which are exposed on the under side.

Heating for the entire house is provided by forced air, gas fired furnace with automatic controls.

Other features include slate facing on the fireplace; adobe block on the Entry Terrace; gas fired 40-gal. water heater; quarry tile and composition counter tops; modern kitchen and laundry equipment; and built-in cabinets.

INTERIOR—Stairwell to connecting entry to lower level where garage and apartment are located . . . joins upper and lower living levels.

JACKSON SQUARE IN 1955 . . . showing south side of Jackson Street between Hotaling Place and Sansome Street.

JACKSON SQUARE

SAN FRANCISCO, CALIFORNIA

OUTSTANDING REDEVELOPMENT PROJECT BECOMES WEST'S BIG DECORATOR CENTER

"Sometimes a blight upon the tree
Takes all my fruit away from me;"
Paul Laurence Dunbar, "The Poet and His Song"

By JANE WINTHROP

A blight ignored means death; for a tree or for a city.

It takes imagination, daring and faith to see a blighted city area and visualize the possibilities of its renaissance.

Imagination, daring and faith built Jackson Square.

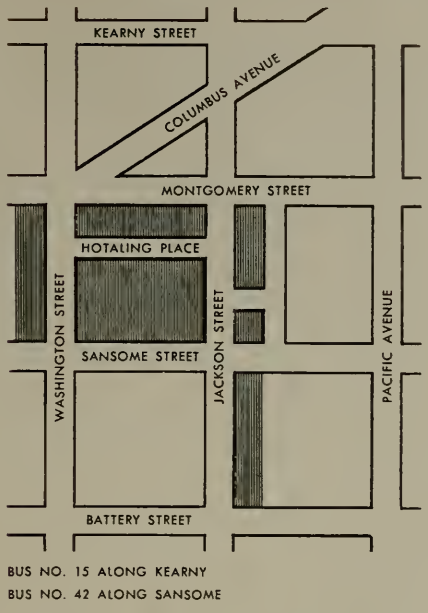
Jackson Square is today the West's prime decorator's center. 32 wholesale firms whose showrooms, housed in 14 buildings, present exciting displays of furniture, fabrics, wall and floor coverings and decorative accessories to the trade.

Little more than two years ago these 14 buildings

were warehouses bordering San Francisco's financial district on Jackson Street between Montgomery and Sansome. Many of them unrivalled in historical importance to the city; "Sherman's Bank," the first French Consulate, the original Ghirardelli Building, the famous Hotaling Building. All were spared by the fire of 1906 and then left to die.

Until five young people of unbridled imagination found them: Edward Griffith, Dorothy and Harry Lawenda, John and Elinor McGuire.

These young people understood and responded to the beauty of the aging buildings. Appreciated the simple Federal architecture so reminiscent of the eastern seacoast. Built in the 1850's, several showed signs of early remodeling in which Italian renaissance influence was shown in the cast iron columns and caryatid and mask ornaments. 18 foot steel shutters enclosed many of the windows set deep into foot thick walls. Today the facades have been elegantly drama-



JACKSON SQUARE as it looked at time of purchase in 1952. View shows south side of Jackson Street between Hotaling Place and Sansome Street.

INTERIOR of Regency House when purchased by Edward Griffith in 1952. Note supporting pillars which were made from masts from schooners abandoned during the California Gold Rush days.

tized and color-designed with architectural details highlighted. Inside they have been swept clean; elevators, heating and wiring installed; provide functional, sweeping showroom areas.

Edward Griffith called in Clarence Slade and together formed the Jackson Square Land Company, purchasing the vacant lot and four buildings on the south side of Jackson up from the corner of Sansome. The Lawendas purchased the former Hotaling Building at the corner of Jackson and Hotaling Place, today the Kneedler-Fauchere building. The McGuires chose the only building opening on Hotaling Place, once a

INTERIOR of Regency House in 1954 when "The Orient Series" of Boris Kroll Fabrics were given national premiere showing. The Mast-Pillars are used as showroom breaks.

THE McGUIRE COMPANY

Remodeled by Roland Terry, Architect of Seattle, Washington.

Entrance doors were salvage from California Building at 1939 Golden Gate International Exposition.

Originally a livery stable, the building was being used as a warehouse when purchased for remodel.

INTERIOR of McGuire Company showrooms . . . original brick walls and overhead beams were left intact, contemporary staircase replaced ramp used by horses when building was stable.

JACKSON SQUARE . . .

PARKING LOT and building, viewed above, as they looked in 1952 when purchased by the Jackson Square Land Company.

JACKSON SQUARE Land Company properties as they look in 1955, viewed below, including parking lot and four buildings.

ONLY NEW BUILDING

Built in project since redevelopment, was designed by Norman Hubbert.

It is a two story showroom of Decorative Imports. View at right.

ORIGINAL FRENCH CONSULATE

Erected in 1850, was bought and remodeled by John Yeon, Architect of Portland, Oregon. Main floor showrooms, upstairs is a showroom and apartment.

Wurster, Bernardi & Emmons, A.I.A. Architects, remodeled above. View shows "The Days," furniture, first showroom of Jackson Square to open.

livery stable, to house their showrooms and furniture factory.

Within a year the Jackson Square Land Company had filled their four buildings with the twelve tenants now occupying, and converted the vacant lot into a parking area for use of customers in the Square. The north side of Jackson then came alive. The magnificent adobe brick French Consulate building, erected in 1848, was purchased by John Yeon, architect, and handsomely remodelled to provide three showrooms and an apartment. One by one five more buildings were converted to elegant showrooms. The only vacant lot was purchased by Edmund B. McDonald who commissioned Norman Hubbert to design what is today the Square's only contemporary building (a two story structure occupied by Decorative Imports).

Jackson Square is growing fast. The handsome, old building at Hotaling Place and Washington Street has been understandingly remodeled by Wurster, Bernardi & Emmons, architects, for showrooms (The Days opened the first of these in January). The ground floor of "Sherman's Bank" was taken over and completely remodeled by Bronstone FiberGlass, Inc., open-

Typical Street View of Jacksan Square

ing in January. Knorr Interior Planning opened in January on Montgomery Street near Jackson.

Statistically speaking Jackson Square's financial record is brief and phenomenal. The evaluation of the property of these 14 buildings two and one-half years ago was $650,000. Today's conservative estimate is $1,250,000. It would cost 50% to 100% more to duplicate these improved facilities with new structures on low-cost ground.

John McGuire of The McGuire Company said "to rent the equivalent facilities of our 18,000 square feet of showrooms and working area would cost us twice what we are paying to own our own building, plus the credit advantages obviously inherent in ownership."

Mr. Frank Emery Cox, writing for Architect and Engineer, on Shopping Centers said . . . "Neighborly compatability is necessary for maximum success."

(See Page 35)

PACIFIC OVERSEAS . . . Showroom.

KNORR
INTERIOR
PLANNING

Remodeling of this building was designed by Don Knorr.

View shows the recently constructed showroom.

HERMANN SAFE COMPANY

New Modern Office and Factory

SAN FRANCISCO, CALIFORNIA

J. FRANCIS WARD, A.I.A., Architect
(Ward & Bolles)

Another milestone of progress is reflected in the Hermann Safe Company's splendid new office and factory building in San Francisco.

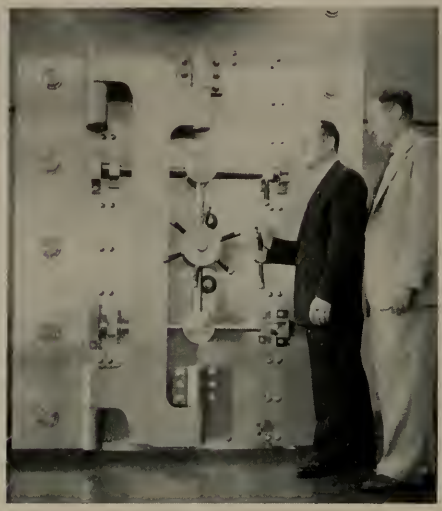
Founded by John Hermann in 1889 as a locksmith shop, the business has enjoyed a steady growth under its founder's efficient management, and later under his

PLAN

New Building is located on Market Street . . . site of historical Market Street Coble Car company's wheelhouse.

DISPLAY ROOM . . . shown in above view, emphasizes the attractive ceiling lighting which creates a warm feeling of friendliness throughout display area of numerous safes.

LOOKING toward the modern offices (view shown below) from the spacious Display Room of safes and safety devices.



successors. Today the firm is classed as one of the West Coast's major industries.

Site of the company's new home, Market and Valencia Streets (its sixth move in sixty-five prosperous years), has a historical background, for here was located in 1883 the steam power plant and wheelhouse of the old Market Street Cable Car Company. Its tall chimney, which was razed for safety reasons years later, long was a landmarkt at that corner.

Like the products it manufactures, the Hermann plant is constructed of fire and 'quake resistive materials. It has a structural steel frame and reinforced concrete walls, metal sash and marble and aluminum decorative features. The display room section is a single story high, while the business and executive offices, drafting room, etc., are located in a two story structure, the second floor featuring a conference room, lunch and rest rooms. To the rear of the office unit is the

BANK VAULT ENTRANCE DOOR, shown above, weighs 14,000 pounds. Jno. R. Hermann, Jr., secretary of the firm and Mert Soverell, treasurer, inspect this huge product manufactured in the plant.

LOOKING TOWARD the Reception Desk from the large Display Room. The lower view shows spaciousness of new offices and displays.

high ceiling, day-lighted factory and machine shop, with a floor area of some 27,000 square feet. Here safes of all types are manufactured, assembled and reconditioned. The shop is equipped with machinery and tools for both heavy and light operations and there is a section partioned off for building and servicing burglar alarm equipment.

Because of the extreme weight of some of the products manufactured or serviced a special design of floor construction was used, consisting of a six inch concrete slab laid on tamped wet beach sand that goes down to bedrock. Over the basement area the floor slab has a 400 lb. per square ft. load limit. To permit loading and unloading of heavy equipment and merchandise, two of the shop doors are 14 ft. high and ten ft. wide. Some bank vault doors weigh as much as 14,000 lbs. (See picture, page 24.)

The sales office portion of the building, pride of the company management, is unusual for its spaciousness and unique lighting arrangement. Expansive plate glass show windows provide a flood of daylight, plus a new type of overhead artificial lighting designed to send a soft, warm glow over the merchandise on floor

(See Page 35)

FACTORY AREA of 27,000 sq. ft. of floor area where safes of all types are manufactured, reconditioned and assembled.

Lower view shows Main Factory facilities for heavy vault construction.

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KRAFTILE

Announces Helpful New Service

Facts on use of Kraftile Structurol Wall Units in Showers, Toilets, Locker Rooms, etc. are presented in the first of a series of Data Sheets, now ready for distribution.

Other Data Sheets, covering additional specific uses, are being prepared.

Write today. We will send you the first Data Sheet, along with convenient file folder in which to store it and other Data Sheets as issued. No cost or obligation, of course.

KRAFTILE COMPANY

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SAN DIEGO CHAPTER

"A Look at Contemporary Architecture," was the subject of an address before the February meeting by Dean Arthur B. Gallion, University of Southern California. The program was sponsored by the University as part of their Diamond Jubilee Celebration.

NORTHERN CALIFORNIA CHAPTER

Members joined with the East Bay Chapter on February 15th in the Sheraton-Palace Hotel, San Francisco, to meet with and discuss California legislative problems with members of the State Legislature, which is currently in session in Sacramento.

Considerable consideration was given provisions of the Architectural Practice Act, a legislative act now pending before the Legislature. Three bills having been offered to amend the Act, following almost a year's extensive study by a special committee.

CHURCH ARCHITECTURE EXHIBIT AT OAKLAND

An exhibition of design and church architecture, under the direction of William V. Rosenquist of the University of California, and sponsored by the Starr King School for the Ministry is currently being shown in the Oakland Art Museum.

The exhibition is designed to provide material for study by the conference of delegates of the Pacific Area Unitarian Churches, scheduled to meet in Oak-

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

Oregon Chapter:
Donald J. Stewart, President; Robert Fritsch, Vice President; Mary Alice Hutchins, Secretary; Walter Gordon, Treasurer. Director: Holman J. Barnes. Office of Secy., 325 Henry Bldg., Portland, Oregon.

Pasadena Chapter:
Henry C. Burge, President; William H. Taylor, Vice-President; Douglas Byles, Secretary; Edward Davies, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Sam Hamill, President; Frank Hope, Vice-President; Lee Eggers, Secretary; Bruce Richards, Treasurer; Directors, Victor Wulff, George Lykos, Dick L. Pinnell, Donald Campbell, Louis A. Dean. Office of Secy.: 4730 Palm Ave., La Mesa, Calif.

San Joaquin Chapter:
Alastair Simpson, President; Robert C. Kaestner, Vice President; Philip S. Buckingham, Secretary; Alan Daley, Treasurer. Directors: David H. Horn, Fred L. Swartz, John P. Miller. Office of Secy., 1922 Clinton Ave., Fresno 3, California.

Santa Barbara Chapter:
Roy W. Cheesman, President; Robert I. Hoyt, Vice President; Glen G. Mosher, Secretary; Wallace W. Arendt, Treasurer. Executive Committee: Robert I. Hoyt, Wallace Arendt, Roy Wilson, Lewis Storrs. Office of Secy., 116 E. Sola St., Santa Barbara, California.

Southern California Chapter:
William Gless Balch, President; S. Kenneth Johnson, Vice-President; Stewart Granger, Secretary; Stanley R. Gould, Treasurer. Directors, Cornelius M. Deasy, Herman Charles Light, George Vernon Russell, Ulysses Floyd Rible. Executive Secretary, Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson J. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnston, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelsen, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Robert L. Durham, President; Francis E. Huggard, 1st Vice-President; Thomas F. Hargis, Jr., 2nd Vice-President; Barney E. Grevstad, Secretary; Lloyd J. Lovegren, Treasurer. Miss Dayris Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter:
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors, Kenneth Storment, Victor L. Wulff. Office of Secy.: 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President Harry W. Seckel, Vice President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P. O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS
Malcolm Reynolds, President; Henry L. Wright, Vice-President; George Lind, Secretary; John Bomberger, Treasurer. Miss Rhoda Monks, Office Secretary, Offices, 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BOARD ARCHITECTURAL EXAMINERS:
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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tasker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

land, and as a public service to educate the layman who will be confronted with problems in building a church.

One phase of the exhibit is a visual presentation of photographs of Churches and articles from numerous publications wherein certain phases of Church design and construction have been presented in some detail.

American Institute of Architects Chapters in San Francisco and the East Bay cooperated in making material available for the showing.

SAN FRANCISCO ARCHITECTURAL CLUB SPRING CLASSES

The San Francisco Architectural Club recently announced the opening of spring classes in the club headquarters at 507 Howard Street.

The Seminar, an annual review for those interested in taking the "State Board" examinations in architecture are scheduled for each Monday evening, and the second semester of the two-year engineering course will be held on Thursdays.

Information on these classes may be obtained by writing the San Francisco Architectural Club, Bert R. Levine, chairman class committee.

The Seminar marks the beginning of the fifty-fourth year of effort by the San Francisco Architectural Club in helping young men of the architectural profession achieve success by offering a systematic educational program for their advancement.

PASADENA CHAPTER

Colored motion pictures of the water color techniques of O'Hara, instructor in the Laguna Art School, highlighted the February meeting held in the Santa Anita Restaurant. O'Hara turns out water color paintings with a two-inch varnish brush.

Committee Chairman and Coordinating Directors appointed by president Henry C. Burge to serve during the ensuing year included: Fitch H. Haskell, Chairman; R. Van Livingston, Director of the Historic Building Committee; Irving Rector, Chairman and Wm. H. Taylor, Director of the Education and Registration Committee; Carl C. McElvy, Chairman and Harold B. Zook, Director of Construction Industry Committee; Lawrence Harlow, Chairman, Practice; Lee B. Kline, Chairman, Fees and Wm. Henry Taylor, Director of Practice of Architecture Committee; Joseph F. Thomas, Chairman and Wallace Bonsall, Director of Governmental Relations Committee; Miles J. Perlis, Chairman and Edward D. Davies, Director of Membership Committee; James B. Stewart, Chairman and Ernest C. Wilson, Jr., Director, Program Committee; F. Lyman Ennis, Chairman and R. Van Livingston, Director of Public Relations; and Robert F. Gordon, Chairman and Bernard Zook, Director of the Exhibits Committee.

WASHINGTON STATE CHAPTER

Dr. Erna Gunther, Professor of Anthropology at the University of Washington and Director of the Washington State Museum, was the principal speaker at the February meeting held in the Sorrento Hotel Seattle.

(See Page 33)

WITH THE ENGINEERS

Structural Engineers Association of California

G. A. Sedgwick, President (San Francisco); C. M. Herd, Vice-President (Sacramento); James L. Stratta, Secy-Treas. Directors, Ben Benioff, Ernest D. Francis, C. M. Herd, Harold Omstead, Michael V. Pregnoff, G. A. Sedwick, Joseph Sheffet, James L. Stratta, J. G. Wright, William T. Wright. Office of Secy., 140 Geary St., San Francisco 8.

Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy-Treas. Directors, C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

Louis J. Alexander, President; Nathan D. Whitman, Jr., Vice-President; David L. Narver, Jr., Vice-President; Jack E. McGee, Secretary; Gilbert W. Outland, Treasurer. Directors: Trent R. Dames and Sterling S. Green. Office of Sec'y, 1201 E. California St., Pasadena 6.

AMERICAN SOCIETY OF CIVIL ENGINEERS SAN FRANCISCO SECTION

William R. Glidden, national president of the ASCE, was the main speaker at the February meeting, held in the Engineer's Club, San Francisco.

Glidden, on a tour of the nation, spoke on the subject "Private Engineering Practice and Public Works" and gave some pertinent information on the position civil engineers will play in the continued expansion program of the U.S. Public Works as recently announced by President Eisenhower.

St. Andrews Episcopal Church, Fullerton, Calif. Architects: Vincent Palmer and H. R. Carlyle. Gen. Contractor: Cole Construction Co.
Social Hall, St. Andrews Episcopal Church.

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Extensive plans were announced by James I. Ballard for SFASCE representation and participation in "Engineers' Week," which will be observed nationally February 20-26. Local plans include TV and radio, newspapers and magazines, speakers and motion pictures, displays, community contacts, and a joint dinner with allied interests.

NATIONAL ENGINEERS WEEK

The Bay Area engineering societies sponsored a "Bay Area Engineers' Week Dinner" on February 22, in the Mural Room of the St. Francis Hotel in San Francisco, in conjunction with observance of "Engineers' Week" throughout the nation.

Jesse E. Hobson, director of the Stanford Research Institute, was the principal speaker and chose as his subject, "The Engineer's Impact in a Free Society."

Henry J. Brunnier served as chairman of the meeting.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Men, Steel and Earthquakes" was the theme of the February meeting held in the Roger Young Auditorium in Los Angeles, with Bethlehem Pacific Steel Corporation's sound movie in color illustrating the causes and effects of earthquakes. The film shows why buildings collapse when subjected to strong seismic forces and demonstrates the importance of progressive building code adoption and enforcement. Testing scenes and earthquake research activities were filmed at Cal Tech, Stanford University, and the University of California at Berkeley.

SEVENTH ANNUAL INDUSTRIAL ENGINEERING INSTITUTE

The seventh annual Industrial Engineering Institute was recently held on the Berkeley campus of the University of California.

Taking part in the program were: David J. McDonald, president of the United Steelworkers of America;

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conchey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Sec.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Sec'y—548 S. Spring St., Los Angeles.

Structural Engineers Association of
Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

John McDougall, supervisor of the Automation and Process Equipment Section, Manufacturing and Engineering Office, Ford Motor Company, Dearborn, Michigan.

Objective of the two-day conference was an exchange of information on current practices and obtaining a better understanding of the field of industrial engineering. More than 400 junior executives and engineers were in attendance.

AMERICAN SOCIETY OF CIVIL ENGINEERS LOS ANGELES SECTION

A "Seabee Field Trip" has been announced for March 5th, with a full day of events and tours sponsored by the Navy officials at the Construction Battalion Center at Port Hueneme.

Included in the tour will be a visit to the pre-stressed concrete beam site where a full sized beam will be stressed to the ultimate. In the field the Navy will demonstrate their newest Diesel Pile Hammer, and a jet engine will be fired up to show the effects of a jet blast on concrete runways.

A noon meal will be served in the Crew's Mess Hall, and after lunch an inspection will be made of the Seabee College Schools where Seabees are trained in every phase of activity from driving a bulldozer to wiring a high tension electric line.

Mid-afternoon will see a full dress military inspection with all military personnel taking part.

Following a tour of the center's supply department, where spare parts and war-returned equipment are thoroughly cleaned and preserved and packaged, the full day's program will end.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

R. H. Harrington, manager, and J. E. Jones, assistant manager of the Clay Brick and Tile Association, were the principal speakers at the February meeting, held in the Engineers Club in San Francisco.

"Reinforced Grouted Brick Masonry" was the subject of the discussion and a film of the Antioch High School construction was shown and narrated by Harrington with a discussion period following.

President Howard Schirmer introduced the past presidents and junior members, and Henry Brunnier, first president of the organization, gave an interesting review of the history of the Association.

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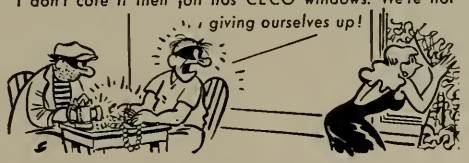

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PRODUCER'S COUNCIL PAGE

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Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

A PROFITABLE CLIMATE FOR LIVING

By BOB MacFARLAND, Minneapolis-Honeywell Regulator Co.*

In ideas about temperature as in every aspect of life, there has been a continual progression increasing the standards of quality. From sixty or seventy years ago when the criterion was survival we have passed through the point where economy of operation was the prime consideration to a point where comfort and efficiency are predominantly demanded.

BOB Mac FARLAND
Minneapolis-Honeywell Regulator Co.

Some of the problems that heating, cooling, or ventilating systems must meet are outside conditions with varying air temperature, sun heat and wind force, plus internal conditions with lights, cooking, even fireplaces in apartments and business machines in offices. The third factor is the individual desires of people according to age, physical activity, metabolism, etc.

Taking these three parts of the problem and considering them together, it becomes obvious that flexibility is of prime importance, and flexibility means in most cases, individual control. It is generally conceded that individual control is the ideal; however, there is always the question of cost. Yet a close look at the economic side of the picture shows in reality individual control is something few buildings can afford to be without.

In office buildings individual control provides a climate for considerably greater efficiency of personnel. This fact is documented by such people as the New York State Commission of ventilation, H. M. Vernon, Cambridge University, and the American Society of Heating & Ventilating Engineers reports. All of these indicate that even moderate increases in temperature such as from 70 to 75 degrees may cause efficiency drops of 15 to 20%. Although human beings are adaptable creatures and can overcome almost any conditions, studies by Macworth of Cambridge University indicate that increases and decreases in efficiency are experienced regardless of other drives or reasons for producing such as incentives.

In our typical office building a proper efficiency climate in the office can increase output by 4 or 5% overall. Assuming even only a 1% efficiency increase from a worker earning $3600 a year, the office can realize a net increase of $36.00 per year for each employee so affected.

In department stores temperature not only effectively regulate sales personnel, but also the stores' customers. If people are comfortable they will spend more time in the store and be more susceptible to effective sales work by employees.

In apartment houses we are not so very concerned with efficiency. However people are concerned with comfort and will pay for comfort received. Surveys taken throughout the country show apartment owners with individual control obtain between 5 and 10% greater income than those comparable buildings not using individual control. A thermostat in an apartment gives the owner an advertising and rental feature equal to none. People who have read periodicals such as

(See Page 32)

**Resume of a talk given before the Producers Council, meeting of February 7th, by Bob Macfarland, dealing with problems of heating, cooling, and ventilating control.*

USE QUALITY PRODUCTS — THE PRODUCERS' COUNCIL — MANUFACTURERS OF QUALITY BUILDING PRODUCTS — CONSULT AN ARCHITECT

ASSOCIATED GENERAL CONTRACTORS ELECT

George C. Koss, President of the Koss Construction Company, Des Moines, Iowa, was elected president of the Associated General Contractors of America for 1955, succeeding John MacLeod, Macco Corpn., Paramount, California, and will be seated at the organization's annual meeting in New Orleans, March 14-17.

Other officers named to serve with Koss are: Frank J. Rooney, president of Frank J. Rooney, Inc., Miami, Florida, vice-president; and District Directors: District 1, Idaho—W. C. Foss, J. A. Terteling & Sons, Boise; District 2, California—Charles L. Harney, Charles L. Harney, Inc., San Francisco; Arizona—Edward O. Earl, San Xavier Rock & Sand Co., Tucson; District 3, Colorado—C. L. Hubner, C. L. Hubner Co., Denver; Utah—J. P. Gibbons, Gibbons & Reed Co., Salt Lake City.

DETENTION HOME

Architects Franceschi & Mullen of Sacramento are working on plans and specifications for construction of a new Juvenile Detention Home to be built in conjunction with the Placer County Hospital in Auburn. The building will be of pre-cast concrete panel type construction and will cost an estimated $80,000.

CHAIN MOTEL

Warren V. Bayley, chairman of the board of the Fresno Hacienda Motel Corpn, Fresno, recently announced work will start in the immediate future on the construction of a $7,000,000 motel on the "strip" at Las Vegas, Nevada, and on a $2,000,000 motel on the south edge of San Luis Obispo in California.

ARCHITECTS MOVE OFFICE

The architectural firm of Evans & Lincoln, San Jose, have moved into new and larger offices at 2189 Moorepark, San Jose. Partners are John M. Evans and Harry A. Lincoln.

JUNIOR HIGH SCHOOL

Architects Neptune & Thomas of Pasadena are preparing preliminary drawings for the construction of a new Claremont Junior High School in Claremont. The first unit of construction will provide for 600 students and will include two classroom buildings, music building, locker shelter, shop building, and dressing rooms.

Pre-cast concrete construction will be used.

DEPARTMENT STORE

The Emporium-Capwell Company of San Francisco will soon start construction of a modern department store building on a site recently purchased on Foothill Blvd., in Hayward, California, opposite the Hayward Union High School.

The new building will contain some 175,000 sq. ft. of floor area and will be of reinforced concrete construction. A paved parking area immediately adjacent to the store will provide for 1500 automobiles.

Estimated cost of the project is $6,000,000.

ARCHITECT SELECTED

Architect Edward Parsons of Reno, Nevada, has been commissioned by the Board of Regents of the University of Nevada, Reno, to design and supervise the construction of the Max C. Fleischmann College of Agriculture Building on the college campus in Reno.

The project comprises four buildings in all: a Home Economics building, an agricultural building, a farm mechanics building, and a farm dairy building. Estimated cost is $2,091,180.

VETERANS MEMORIAL

Architects Butner, Holm & Waterman of Salinas are completing drawings for construction of a new Veteran's Memorial Building in the town of Spreckels in Monterey county.

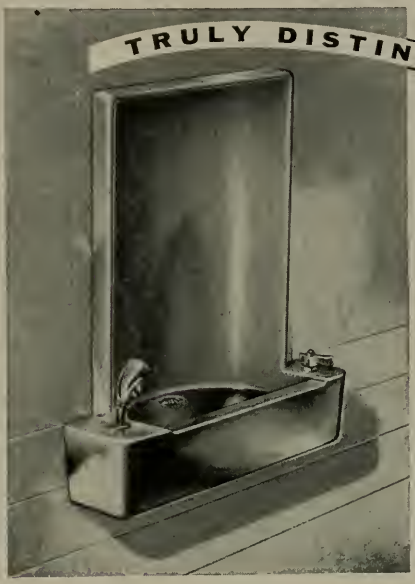
The 1 story frame and stucco building is being built by the Spreckels Veterans District and will contain an auditorium, banquet room, kitchen, club rooms, meeting room, offices and a caretakers apartment.

Estimated cost is $100,000.

WOOLDRIDGE COMPANY IN SUNNYVALE PLANT

Establishment of Wooldridge Mfg. Co.'s Sunnyvale, California, plant as one of eight divisions of Continental Copper & Steel Industries, Inc. of New York, integrates the research, engineering and production facilities of the entire expanded organization for a complete coast-to-coast service.

R. V. Gankin, head of the Sunnyvale plant, pointed out that his firm now offers fabrication and installation service in the West to Eastern firms ordering equipment for their Western plants.



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PERSONALITIES

LOUIS BODMER, A.I.A.
Architect
San Diego, California

Louis Bodmer was born at Zurich, Switzerland, some 56 years ago, and spent his boyhood days in the land of the Alps. He received his technical education for the practice of architecture at the Winterthur Technicum for Architecture in Winterthur, Switzerland.

LOUIS BODMER, A.I.A.
Architect

Following his early education Bodmer traveled extensively, studying architecture in Germany and France. Arriving in New York in 1922 he worked as a draftsman; then moved to Salt Lake City for a year, and then to Los Angeles, Riverside for three years and recognizing great architectural opportunities in San Diego, moved there where he has practiced for the past 25 years.

Bodmer was architectural supervisor for the California Pacific International Exposition in San Diego, 1935-36. For 12 years he served as corporation architect for the Spreckels Company, and among the more recent projects designed are the San Diego Municipal Airport, San Diego Federal Savings and Loan, over a dozen banks, remodeling of the San Diego Club, many commercial store buildings, and he is now engaged in the planning of a large regional shopping center.

Past president of the San Diego Chapter, A.I.A., Bodmer is a member of the San Diego Engineers Club, and San Diego Yacht Club where he enjoys his hobby, sailing.

NEXT MONTH: George J. Wimberly and Howard L. Cook, Architects, Honolulu, T. H.

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PRODUCERS COUNCIL

(From Page 30)

Life, Time, Saturday Evening Post, recognize this sign of comfort and know it is a mark of quality.

In addition to the talk mentioned above a series of Vu-graph slides were shown illustrating the profitability of using individual control systems in buildings such as offices, department stores, and apartments. Mr. Macfarland suggested further that any architect or engineer who desired could perform an experiment as to the applicability and efficiency in using these controls by making a three-month trial in their own office space. Further, that if such a trial was made the architects and engineers would not again be without the profitable assistance in comfort and efficiency the controls would give.

COMING EVENTS

The March informational meeting of the Producers Council will be held on the 7th at the Palace-Sheraton Hotel.

E. M. Linforth will talk about Plexiglas Louvre Light. Slides of installations will be shown.

ARCHITECT PIETRO BELLUSCHI HONORED BY NATIONAL GROUP

Pietro Belluschi, A.I.A. Architect of Seattle, Washington, and Boston, Massachussetts, was elected to lifetime membership in the National Institute of Arts and Letters, according to an announcement by Marco Connelly, president of the Institute.

Belluschi and fourteen other Americans were chosen for their distinguished contribution in the field of creative achievement in art, music or literature.

Membership in the Institute is a prerequisite for election to the American Academy of Arts and Letters, which is limited to fifty members. The Institute's membership is 250 and was founded in 1898 dedicated to the futherance of literature and fine arts in the United States.

A.I.A. ACTIVITIES

(From Page 27)

Dr. Gunther is one of the United State's most eminent authorities on Pacific Northwest Indians and their art and culture and gave many interesting descriptions of Indian culture emphasized by numerous fine exhibits.

New Members include: Kenneth L. Hargreaves, Seattle; M. Rod McEntire, Fairbanks, and Raymond H. Peck, Seattle. This brings the Corporate Membership to a total of 40 members. George Bolotin, Seattle, and George F. Johnson of Oak Harbor have been elected to Associate members.

EAST BAY CHAPTER

Assemblymen and Senators of the seven Bay Area counties were guests at the annual Legislative Meeting held on February 15th in the Sheraton-Palace Hotel in San Francisco.

The meeting was a joint meeting with the San Francisco Chapter and architects from many sections of northern California were in attendance.

Principal discussion centered on proposed new legislation before members of the State Legislature which is now in session in Sacramento, and the effect of such acts upon the practice of architecture.

WOMEN'S ARCHITECTURAL LEAGUE EAST BAY CHAPTER

Elizabeth Thompson, western editor of Architectural Record, was the principal speaker at the February meeting held in the College Women's Club in Berkeley. She discussed the subject of Public Relations of the Women's Architectural Leagues as related to the profession of architecture.

Mrs. Keith Reid was elected president for the 1955 year and other officers chosen to serve with her included Mrs. John Zerkle, First-Vice President; Mrs. Gerald McCue, Second Vice President; Mrs. George Kern, Recording Secretary; Mrs. William Jeffries, Corresponding Secretary; and Mrs. Daniel Date, Treasurer.

OREGON CHAPTER

The 44th Annual Banquet was obserevd on February 22nd, in the Multnomah Hotel, with Paul Tiry, A.I.A. Architect the principal speaker. Arrangements for the meeting were under the chairmanship of "Al" Hilgers.

Oregon architects will have an exhibition of designs at the Oregon Education Association conference scheduled to be held in the Portland Auditorium, March 17-18.

CALIFORNIA COUNCIL OF ARCHITECTS

Organization meeting for 1955 will be held at the Balboa Bay Club, Balboa, February 24-26.

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Items scheduled for primary consideration include: election of officers for the new year, consideration of revision of the Architectural Practice Act now before the California State Legislature, formulation of a "policy" regarding legislation initiated by the United Designers to license "limited building designers," and appointment of committees.

The annual dinner meeting will be held on Friday evening with National A.I.A. President Clair Ditchy and National First Vice-President Earl Heitschmidt of southern California, guests of honor.

A special luncheon devoted to the Sierra-Nevada A.I.A. Region, will be observed on Saturday, February 26th, with Donald Beach Kirby, regional director, presiding. Mr. Ditchy will discuss architecture on the national level.

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ARCHITECT MOVES OFFICE

Architect William C. Ullrich, A.I.A. has moved into new offices at 1870 Hillhurst Avenue, Los Angeles, according to a recent announcement.

SOUTHERN CALIFORNIA ARCHITECTS PREDICT BUILDING CHANGES

Two members of the American Institute of Architects, speaking in Los Angeles, recently predicted widespread changes in the construction industry through the use of reinforced plastics.

Ulysses Floyd Rible, president of the Southern California Chapter of the A.I.A., and Robert F. Smith, A.I.A., of Miami, Florida, predicted great advances. The architects spoke before delegates to the 10th annual Technical and Management Conference of the Reinforced Plastics Divison, of the Society of the Plastics Industry, Inc.

Architect Rible states the plastics industry might create a number of products which would change the very approach to construction of residences and other buildings. Among the products listed by Rible were such things as joists, studs, sectional stairways, drainboards, shingles, window blinds, termite shields and rain gutters.

"One of the most imposing advances ever made in the construction industry," declares Rible in reference to the potential of reinforced plastics. He urged the plastics industry to double its effort towards research.

Architect Smith emphasized the qualities of light weight and structural strength which assures plastics a place in the architectural future. He is a pioneer in the use of plastics in home construction.

Plastics offer a combination of light and color control with integral insulation, Smith pointed out. "This," he said, "should make for a more attractive and more livable home." Smith painted an appealing word picture of translucent plastic walls with the shadows of foilage illuminated from the outdoors at night.

Quantity production of reinforced plastics will eventually bring about the construction of bigger and better homes for the same money, Smith predicted.

SOUTHERN CALIFORNIA CHAPTER

The February meeting, held in the Hollywood Athletic Club, was devoted to "Chapter Activities" including committee reports and projected schedules of work; and nomination of Chapter delegates to attend the annual Convention of the American Institute of Architects which will be held in Minneapolis, June 20-25.

WOMENS ARCHITECTURAL LEAGUE SAN FRANCISCO CHAPTER

"The Purpose of the Producers Council" was the subject of a talk by Robert Nicoliasen, Producer Council member at the February meeting held in the San

Francisco Women's City Club. Nicoliasen answered a number of questions put to him relative to the Producers Council.

It was announced that James Abajian, acting director of the California Historical Society, will be the guest speaker at the March meeting, which will also be held in the Women's City Club.

PASADENA CHAPTER AIA ISSUES BOOKLET

An interesting and valuable booklet entitled "How the A.I.A. Serves You," has been prepared and issued by the Pasadena Chapter of The American Institute of Architects.

The booklet describes the territory served by the chapter and the types of membership included in the Chapter.

ENGINEER OPENS OFFICE

Eric Moorehead, engineer, has opened offices at 1460 Euclid Avenue in Berkeley 8.

HERMANN SAFE CO.

(From Page 25)

display, a feature that is especially desirable on a dark day. To carry out this unique idea the electrical engineers designed a false ceiling with slimline fixtures above it, and translucent plastic squares to diffuse and distribute the overhead light.

"Safes are cold. This new lighting technique makes them look warm, we hear our customers say," explained John R. Hermann, company president. Speaking for himself and associates, Mr. Hermann added: "We have yet to find anything wrong with the design and construction of the building," a tribute, indeed, to the architects, J. Francis Ward, Ward and Bolles, and the general contractors, Rothschild, Raffin & Weirick.

The functional office furniture to meet the requirements of today's office set-up was supplied by the M. G. West Co., specialists in this type of equipment.

EAST BAY STRUCTURAL ENGINEERS SOCIETY

The East Bay Structural Engineers Society, representing Oakland, Berkeley, Hayward, Richmond, recently elected Robert Dalton, Jr. as president of the society for the ensuing year.

MacGregor Graham was named secretary-treasurer.

FEMINEERS

The February meeting of the Femineers was held in the Elks Club, San Francisco, with an outstanding dramatization of a new Broadway play by Margareet Woodall being given.

PICTURE CREDITS: Jeffrey Belcher, Cover, Page 8, 9, 10, 11, 13; Dean Stone & Hugo Steccati, Page 14, 16 (bottom), 17 (bottom), 19 (top), 21 (top); The Illustrators, Page 17 (top), 19 (bottom), 20, 21 (bottom); E. N. Goldstine, Page 22, 23, 24 (bottom), 25.

JACKSON SQUARE

(From Page 21)

This, in a single sentence, is the heart of the Jackson Square story. There is today, and has been from its inception, a complete and wonderful compatability between the people of Jackson Square. As each new firm comes in it becomes part of the "family." The Jackson Square Association was formed. A loosely-knit, informal organization to which all the firms belong. There are no by-laws, no minutes kept of meetings; but there is cooperation. No visitor comes to Jackson Square without being given the "tour" . . . personal introductions from showroom to showroom up and down the street. Advertising for Jackson Square is paid for cooperatively by the association members, and free-for-all discussions are held at monthly meetings to clear "policy" and acquaint the firms with new merchandise in the Square. The 32 firms are competitive. Highly competitive. But they are building their national recognition on an old-fashioned principle of friendly rivalry.

The parking problem, which appears foremost in most planning-minds today, was solved by the success of the area. Because of the traffic stimulated two new garages have been erected within a block walking

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distance, no more than the walk entailed in most gigantic parking areas for shopping centers today.

The scope of merchandise presented in Jackson Square has increased. New firms are opening. Knorr Interior Planning is a new concept in business, providing a complete coordinating service to architects by integration of architectural structure with its interior, as well as supplying and installing of furniture, floor coverings, fabrics and interior fixtures. Bronstone FiberGlass, Inc. is America's first showroom devoted exclusively to fiberglas products for wall, floor and ceiling construction and decorative fabrics. Large in the minds of its owners was the growing demand of architects for structural fiberglas products.

Has the daring proved sound? Yes. Jackson Square is a success. It has, however, just begun. It will grow and expand because of the soundness of conception: an area, centrally located and easily accessible, where the decorators and buyers from America's retail outlets can find a practical concentration of widely diversified firms all acting as purveyors of quality design. The drawing boards in Jackson Square are busy. They have stimulated many of the already existing manufacturers in the Bay Area, and created new firms through their demands for new products. Jackson Square today is a mecca for America's dealers in "homes beautiful."

Recently buyers from a prominent retail store in Salt Lake City returned to Jackson Square. "We are no longer going to New York to buy," they said, "Jackson Square offers us all that New York offers and more, both in originality of design and price." "In addition," they continued, "the courtesy and friendliness of the people here make our buying trips a pleasure, and the concentration of so many firms in such a small area makes our task much easier."

"And look before you ere you leap,
For as you sow, ye are like to reap." . . . Samuel Butler.

Take a look at your city. Is there a section lying fallow, where the sowing of imagination may, too, reap a rich harvest of new beauty, new trade, new growth?

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ARCHITECT & ENGINEER
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AMERICAN SOCIETY OF CIVIL ENGINEERS ANNOUNCES AWARD

The American Society of Civil Engineers has established an Ernest E. Howard Award "to recognize a civil engineer who has made a definite contribution to the advancement of structural engineering through either writing or performance."

The award is in honor of ASCE's 1950 president, who died last year.

CONTRACTOR ASSOCIATION PRESIDENT

Carl H. Wittenberg has been elected president of the Southern California Chapter of Associated General Contractors of America, it was announced recently.

Wittenberg, partner and general manager of Ford J. Twaits Co., contractors and engineers, has long been identified with the construction business in Southern California.

Other newly elected officers of Associated General Contractors include Walter F. Maxwell, J. V. Quinn and George Thwing, Jr., vice presidents; W. E. Irish, treasurer, W. D. Shaw, general manager.

New directors include R. F. Rasey, John Sawyer, Paul Wetcher, Jack Bernard, Richard Spicer, Harry Wilson, Beal Shaw.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

TOWARD BETTER SCHOOL DESIGN. By William W. Caudill. Dodge Books, 119 West 40th Street, New York 18. Price $12.75.

Here is a valuable book by one of America's top authorities on school planning and design which sums up years of research and study in this important field.

It is a common sense approach to planning and designing school buildings of all types, elementary through college. The main text by the author militantly pursues the thesis that each school building is at its best a working solution to the specific problems which caused it to be built. Although school architectural styles may change, this approach—making school planning a problem-solving process—should remain the same, growing sounder with time and flourishing when imitated most.

The book is important reading for school administrators, boards of education, architects, engineers, parent-teacher groups and other informed citizens in communities faced with school building problems.

SIMPLIFIED DESIGN OF STRUCTURAL STEEL—Second Edition. By Harry Parker, M.S., John Wiley & Sons, Inc., 440-4th Ave., New York 16. Price $5.75.

The author of this "professional edititon" is Professor of Architectural Construction, School of Fine Arts, University of Pennsylvania, and an eminent authority on his subject.

The First Edition was published in 1945. The new edition contains revised tables of properties of structural shapes and throughtout the book discussions and illustrative examples have been modified in accordance with current specifications and unit stresses; many new safe load tables have been added.

This is a practical book; its purpose is to present clearly and concisely the fundamental principles upon which the design of structural steel members is based. In this book will be found the data and information that will enable one to design many of the structural members that occur every day in practice.

GLASS REINFORCED PLASTICS. By Phillip Morgan, M.A., Philosophical Library, Inc., 15 E. 40th Street, New York 16. Price $10.00.

Glass reinforced plastics is a many-sided subject, and a proper study of it involves organic chemistry, design, moulding processes and the major applications. This book is an attempt to gather the essential facts for the general reader, yet explain in sufficient detail for the specialist.

The chief resins used for bonding glass fibres are polyesters, phenolic, epoxide, silicone, melamine and fueane resins and their use with glass is described by the author.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Designing of metal letters. A new booklet on "Designing of Metal Letters by the Modular System", has just been published by the Michel and Pfeffer Iron Works.

The booklet comprising data sheets, illustrates six of the most commonly used types of letters with schedules of the available stock patterns and sizes in aluminum, bronze and stainless steel. Also, the modular principal has been applied to the spacing and developing of special sizes by the use of factors and a modular unit of one-eighth of the letter height. Methods of erection are also shown for convenience of the architect.

Copy of this booklet and data sheets may be obtained by writing DEPT-A&E, Michel & Pfeffer Iron Works, Inc., 212 Shaw Road, South San Francisco.

Helpful information on Corrugated Culvert Pipe. The Columbia-Geneva Steel Company, division of U.S. Steel, has just published a pamphlet containing helpful information on the uses of corrugated culvert pipe, including charts showing how to determine culvert size, recommended gages for USS corrugated metal pipe, drainage flow in cubic feet per second, capacities of corrugated culvert pipe when flowing full, areas and weights of corrugated culvert pipe, and USS

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standard black sheet gauges. Free copies are available, write DEPT-A&E, US Steel Corpn, Columbia-Geneva Steel Division, Russ Building, San Francisco, California.

Sliding glass door. Choice of a combination wood and aluminum door or an all aluminum door from the same basic unit is described in a brochure (A.I.A.) File No. 16-E); includes elevations and plans; specifications and drawings showing various types of installations. Write DEPT-A&E, T. V. Walker & Sons, Inc., 217 N. Lake St., Burbank, California.

1955 Edition of overdoor guide. The 1955 edition (A.I.A. File No. 16-D) of the Barber-Colman overdoor guide on overhead type doors, electric operators, and radio control has just been published; well illustrated booklet covers use and equipment for industrial, commercial, and residential applications; methods of preparing buildings and space required for the installation given in drawings and charts. Copy free write DEPT-A&E, Barber-Colman Co, Rockford, Ill.

Distribution and lighting panelboards. A complete package of new descriptive bulletins covering distribution and lighting panelboards has been published by GE. The package consists of nine 2-color bulletins; all include complete ratings, catalog numbers, dimensions, specifications and other engineering data. May be obtained by writing DEPT-A&E, Advertising and Sales Promotion, General Electric Corpn, Plainville, Conn.

Lighting for today. Complete catalog on modern lighting fixtures; gives illustrations and description of each item, also prices, specifications and colors. Copy available: write DEPT-A&E, Gross Wood & Co., 230 Natoma Street, San Francisco, Calif.

Grating and stair treads. New bulletin describes and explains important construction features; photographs and detail sketches fully illustrate many styles available as well as typical isntallations and applications; data on serrated grating, armoring and flooring also included. A series of valuable tables list the grating weights, standard sizes of safety stair treads, panel widths, and the safe bearing loads for various bearing-bar spacings; diagrams explain typical fastening devices, and how applied to hold grating panels secure. Available by writing DEPT-A&E, Dravo Corpn, 1203 Dravo Bldg, Pittsburgh 22, Pa.

Standard chimney construction. A comprehensive, completely illustrated, brochure describing standard chimney construction as recommended by the National Board of Fire Underwriters, complete with drawings and A.S.T.M. specifications, for Clay Flue Lining and related clay products; suitable for use as a standard ordinance for chimney construction in cities and towns of any size. Available upon request from DEPT-A&E, Clay Flue Lining Institute, 611 1st National Tower, Akron 8, Ohio.

Metal Lath and plastering accessories. New brochure (A.I.A. File No. 20-b-1) gives valuable data on use of metal lath, specifications, construction details. Many drawings and illustrations are used to show actual construction situations where metal lath best meets the needs. For free copy write DEPT-A&E, Penn Metal Company, Inc., or the Northhill Steel Co, Inc., 4920 15th Ave, Sacramento, California.

Comparative costs of low cost schools. A Research Report of the Structural Clay Products Research Foundation of Chicago, Ill. written by S. E. Hubbard; includes "The Problem," "Scope of Study," Metal Schools, Specific Schools, Construction Cost Analysis, and Design Study. Architects, engineers and members of school boards may secure a copy by writing DEPT-A&E, Clay Brick & Tile Association, 55 New Montgomery Street, San Francisco 5, Calif.

What you should know about steam heating. A 16-page booklet gives heating system designers a concise source of information to evaluate steam as a heating medium for specific types of installations; gives a complete checklist guide for a designer to follow in specifying a heating system with steam covering 33 points; describes characteristics of steam, relating them to specific efficiencies and advantages; outline types of buildings, equipment, and heating control maintenance, repair and alteration also discussed in detail. Write for free copy Steam Heating Equipment Mfgr's Ass'n, 450 East Ohio St., Chicago 11, Ill.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be addad in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull brass plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45
Cement—		
Common (all brands, paper sacks), Per Sack, small quantity (paper)		$1.25
Carload lots, in bulk, per bbl.		3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.		
Cash discount on L.C.L.		2%
Trinity White, Medusa White, Calaveras White	1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.	

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.62
Aggregates—Haydite or Basalite		
¼-inch to ⅜-inch, per cu. yd.		$7.75
⅜-inch to ½-inch, per cu. yd.		7.75
No. 6 to 0-inch, per cu. yd.		7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—	33/32x2¼	½x2	⅜x2	⅝x2
	$	$	$	$
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390 00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grade	375.00
33/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00
Floor Layer Wage $2.83 per hr.	

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & Btr. 1 x 4 T & G Flooring	$225 00
"C" and better—all	225 00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry	185.00
8 to 24 ft.	

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard $ .75
Three-coat work	per yard 1.00
Cold water painting	per yard 25c
Whitewashing	per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$...	$...
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (Composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(21
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
YERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: NIles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

SHOPPING CENTER, Belmont & Chestnut, Fresno. Bakman Investment Co., Fresno, owner. 1-story concrete block and frame construction; air conditioning, $250,000. ARCHITECT: Benjamin Lippold, Fresno. GENERAL CONTRACTOR: Walker & Walker, Fresno.

PACKING PLANT, Modesto, Stanislaus county. Farmers Frozen Foods Co., Modesto, owner. 1-story reinforced concrete and frame construction, $50,000. ARCHITECT: G. N. Hilburn, Modesto. GENERAL CONTRACTOR: A. C. Carroll, Modesto.

PARISH HALL, St. Paul's Lutheran Church, Long Beach, Los Angeles county. St. Paul's Lutheran Church, Long Beach, owner. 1-story frame and stucco, Parish Hall Chapel and Sunday School building; composition roofing, metal sash, concrete slab and asphalt tile covered floors, forced-air heating, toilets; 4500 sq. ft. floor area. ARCHITECT: O. J. Bruer, Montebello.

PRESS & RADIO ROOM, Kezar Stadium, San Francisco. City and County of San Francisco, owner. Alterations and additions to the Press and Radio broadcasting booth and facilities at Kezar Stadium, Golden Gate Park, $93,000. GENERAL CONTRACTOR: Robert L. Wilson, San Francisco.

Y.M.C.A. BLDG., Reno, Nevada. Reno Y.M.C.A., owner. 1-story, with basement, concrete block and structural steel frame construction; swimming pool, gymnasium, shower, locker rooms, $298,610. ARCHITECT: Ferris & Erskine, Reno. GENERAL CONTRACTOR: Capriotti, Reno, Nevada.

MEDICAL BLDG., Berkeley, Alameda county. Dr. Carl Gootsch, owner. 2-story frame and stucco, some masonry, aluminum sash, asphalt tile floors; complete facilities for 8 suites of offices, $130,000. ARCHITECT: Reynolds & Chamberlain, Oakland. GENERAL CONTRACTOR: F. P. Lathrop Constn Co., Berkeley.

SHOPPING CENTER, Fruitridge, Sacramento county. Stop-N-Shop Market, Sacramento, owner. 1-story reinforced concrete, tilt-up, construction; wood roof, stone and brick veneer, plate glass front; 51,000 sq. ft. of floor space, $500,000. ARCHITECT: Clarence C. Cuff, Sacramento. GENERAL CONTRACTOR: Erickson Constn Co., North Sacramento.

RESIDENCE HALL, Whittier College, Whittier. Whittier College, owner. 2-story, part basement, reinforced concrete residence hall; 23,000 sq. ft. floor space;

45 double rooms, lounges, $337,700. ARCHITECT: William H. Harrison, Los Angeles. GENERAL CONTRACTOR: Kemp Bros., Los Angeles.

OFFICE BLDG., Los Angeles. California Teachers Association, Los Angeles, owner. 5-story and basement, reinforced concrete; built-up roofing and roof insulation, structural steel, metal stairs, steel floor deck, movable steel partitions, aluminum windows, ceramic tile, heating, air conditioning automatic control, electrical work; 68,000 sq. ft. floor area, $1,194,000. ARCHITECT: Kistner, Wright & Wright, Los Angeles. GENERAL CONTRACTOR: Myers Bros., Los Angeles.

MAUSOLEUM, Tucson, Arizona. Southwestern Cemeteries Corpn, Tucson, owner. Six hundred and five crypt mausoleum at Souhtlawn Memorial Park in Tuscon; reinforced concrete construction, slab floor and roof, composition roofing, marble work, tile work, bronze, wrought iron, electrical work: 92x124 ft. in area, $250,000. ARCHITECT: Fred M. Guirey, Phoenix, Arizona.

BOWLING CENTER, Las Vegas, Nevada. Showboat Casino, Las Vegas, owner. 24 bowling lanes, restaurant, cocktail lounge, gaming room, meeting room, offices, asbestos shingle roofing, concrete, asphalt and quarry tile and carpeted floors, heating, refrigerating, air conditioning, plate glass front, interior plaster, toilet rooms, ceramic tile; 33,000 sq. ft. floor area — $226,275. ARCHITECT: Powers, Daily & De Rosa, Long Beach, California. GENERAL CONTRACTOR: Ben O. Davey Constn Co., Las Vegas, Nevada.

STORE & DRIVE-IN, San Lorenzo, Alameda county. Berkeley Properties, Inc., Berkeley, owner. Frame construction, wood exterior; 20,000 sq. ft. floor area devoted to store and restaurant — $150,000. ARCHITECT: Paul Hammarberg, Berkeley. GENERAL CONTRACTOR: Frank F. Souza, Hilmar.

NEW HIGH SCHOOL, Phoenix, Arizona. Glendale Union High School District, Phoenix, owner. Comprises: 9 buildings, including 4 classroom buildings 150x64 ft. each containing 25 classrooms; gymnasium building 121x154 ft., locker rooms, showers; multi-purpose building 151x68 ft., music room, stage, office, storage; shop building 41x122 ft.: bus garage 40x60 ft.: and general administration building: masonry construction, poured gypsum roof decking, structural steel, sheet metal, plastering, tile work, insulation, steel sash, acoustic tile, asphalt tile, gas fired boilers, unit heaters, refrigeration — $746,995. ARCHITECT: Edward L. Varney Associates, Phoenix. GENERAL CONTRACTOR: D. O. Norton & Son, Phoenix.

ELEMENTARY SCHOOL ADD'N, Russell School, Hayward, Alameda county. Russell Elementary School District, Hayward, owner. Additional 1 classroom, kindergarten, arts and crafts, home making— $115,000. ARCHITECT: Ralph N. Kerr, Oakland. GENERAL CONTRACTOR: N. T. Lewis, Hayward.

OFFICERS CLUB, Stead Air Force Base, Washoe county, Nevada. Corps of Engineers, U.S. Army, San Francisco, owner. 1 story wood frame building, parking areas, walks, utilities, 6,400 sq. ft. floor space—$75,363. GENERAL CONTRACTOR: T. & T. Engineering Co., Reno, Nevada.

INTERMEDIATE SCHOOL, Pine Grove School, Orinda, Contra Costa County. Orinda Union Elementary School District, Orinda, owner. Frame and stucco con-

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.65	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

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RENTAL—$175.00 Mo. 400 sq. ft. office space, 300 sq. ft. warehouse space, parking area. Suitable for factory distributor. Write or phone Mr. Dillon, 252-12th St., San Francisco, HEmlock 1-3943.

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SAND BLASTING EQUIPMENT and sand: Painters scaffolding, compressors rented, etc. Call JACK SMITH for prices. Smith Industrial Supply Co., 395 Irwin St., San Francisco. Phone UNderhill 1-2861.

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MAYNARD DIXON MURALS—signed and dated 1935. Two, oil on canvas, about 7 feet 10 inches x 15 feet 5 inches and 7 feet 11 inches x 17 feet 10 inches. Mountains and mounted figures. Edward C. Washer, 628 Montgomery St., San Francisco 11, GArfield 1-8427.

struction; comprising 13 classrooms, home making department, shops, kitchen, library, toilet rooms — $479,521. ARCHITECT: Jack Buchter, Orinda. GENERAL CONTRACTOR: Jos. Bettancourt, San Bruno.

JUSTICE COURT BLDG., Fair Oaks, Sacramento county. County of Sacramento, owner. 1 story frame construction, routed plywood exterior, air conditioning, concrete floors, asphalt tile floors—$33,956. ARCHITECT: Kenneth Rickey & Brooks, Sacramento.

ELEMENTARY SCHOOL, San Rafael, Marin county. San Rafael Board of Education, owner. New addition to the Davidson Elementary School comprising 6 classrooms and toilet rooms—$115,811. ARCHITECT: Gromme, Mulvin & Priestly, San Rafael. GENERAL CONTRACTOR: Zoellner Constn Co., Ross.

NEW GRADE SCHOOL, Roseville, Placer county. Roseville Elementary School District, owner. Frame and stucco construction to provide facilities for 5 classrooms, toilet rooms—$73,421. ARCHITECT: Chas. F. Dean, Sacramento. GENERAL CONTRACTOR: Lawrence Construction Company, Sacramento.

BOWLING ALLEY-BAR-RESTAURANT, Los Angeles. Sunset-Serrano Bldg. Corpn., Los Angeles, owner. Concrete block, composition roof, concrete, asphalt tile and terrazzo floors, interior plaster and acoustic plaster, acoustic tile ceilings, central ventilating and heating systems, central gas water heater, toilet and locker rooms, kitchen and facilities, tapered steel beams, black-top paving; 99x150 ft. area —$130,000. ARCHITECT: Wm. Shinderman, Beverly Hills. GENERAL CONTRACTOR: Lacey F. Johnson, Los Angeles.

BANK BLDG., San Jose, Santa Clara county. Bank of America, San Francisco, owner. 1 story with mezzanine, type 3; reinforced concrete and frame construction, 62x177 ft. of area—$169,144. ARCHITECT: Capitol Co., San Francisco. GENERAL CONTRACTOR: Copple Constn. Co., San Jose.

MORTUARY, Torrance, Los Angeles county. Halverson Leavell Mortuary, Torrance, owner. Concrete slab, metal sash, plate glass, electrical work, plumbing, asphalt paving; 4450 sq. ft. in area. ARCHITECT: Winslow & Lind, Beverly Hills. GENERAL CONTRACTOR: Packard Constn. Co., Venice.

WAREHOUSE & OFFICE, Oakland, Alameda county. Mulligan's Dist. Co., Oakland, owner. 1 story concrete block and frame construction, 50x100 feet of area. ENGINEER: R. A. McGuire, Oakland. GENERAL CONTRACTOR: American Constn. Co., San Leandro.

MEMORIAL CLOCK TOWER, City College, Santa Monica, Los Angeles county. Santa Monica Board of Education, owner. Concrete memorial tower, 60 ft. high—$16,671. ARCHITECT: Barienbrock & Murray, Santa Monica. GENERAL CONTRACTOR: John Voiz, Santa Monica.

MAUSOLEUM ADD'N, Chapel of The Chimes, Santa Rosa, Sonoma County. Chapel of The Chimes, Santa Rosa, owner. 1 story reinforced concrete, marble and bronize interior, 46x44 ft. in area—$50,000. ARCHITECT: John D. Wagenet, Lafayette. GENERAL CONTRACTOR: Rapp Constn. Co., Santa Rosa.

STADIUM, High School, Fontana, Los Angeles county. Reinforced concrete, 5000 person capacity; compacted fill, fencing—$43,780. ARCHITECT: Neptune & Thomas, Pasadena. GENERAL CONTRACTOR: Hoefer Constn. Co., Fontana.

ELEMENTARY SCHOOL ADD'N, El Rancho School, South San Francisco, San Mateo county. South San Francisco Unified School District, owner. Frame and stucco construction; 14 classrooms—$170,000. ARCHITECT: Leslie G. Irvin, Redwood City. GENERAL CONTRACTOR: Pacific Coast Bldrs, San Francisco.

WAREHOUSE, Los Angeles. Sperry and Hutchinson Co., Los Angeles, owners. Concrete foundations, brick masonry walls, wood roof trusses on steel frame, wood joist roof, plumbing, ventilating, sprinkler system, car-height floor, railroad tracks; 60,000 sq. ft. floor area. ENGINEERS: A. Epstein & Sons, Chicago, Ill. GENERAL CONTRACTOR: George A. Fuller Co., Los Angeles.

MEMORIAL BLDG., Veteran's Building, Tulare. Tulare Memorial District, Tulare, owner. 1 story, reinforced concrete, tilt-up construction, steel roof truss, steel sash, insulation, air conditioning, maple floors, skylights, kitchen equipment, ceramic veneer; 37,000 sq. ft. floor area—$584,350. ARCHITECT: Kennedy & Schroeder, Bakersfield. GENERAL CONTRACTOR: Floyd G. Borchardt, Stockton.

CHURCH CLASSROOMS, Long Beach. Silverado Park Community Methodist Church, Long Beach, owner. 2 story concrete block, composition shingle roofing, concrete floors, casement sash, forced air heating, interior plaster, toilet rooms, ceramic tile—$25,000. ENGINEER: Harold E. Ketchum, Long Beach.

GYMNASIUM ADD'N, High School, Hayward, Alameda county. Hayward Union High School District, owner. Work to consist of remodel of high school and construction of a new gymnasium building; reinforced concrete walls, roof and floor slab; 5,000 sq. ft. floor area—$185,305. ARCHITECT: Anderson & Simonds, Oakland. GENERAL CONTRACTOR: Greuner Constn Co., Oakland.

HOSPITAL ADD'N, St. Francis Hospital, San Francisco. St. Francis Hospital, San Francisco, owner. 3 story and basement, reinforced concrete construction, enameled steel exterior, metal sash, metal stud partitions, terrazzo and vinyl floors, 2 elevators, provision for 5 additional floors at a later date, 80x110 feet—$550,000. ARCHITECT: Frank W. Trabucco, Architect and Lewis H. Hurlbut, San and Lewis H. Hurlbut, San Francisco. GENERAL CONTRACTOR:

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RESTAURANT & BARBER SHOP, San Bernardino. Gus and George Lada, San Bernardino, owners. Composition roofing, metal sash, aluminum and plate glass store front, interior frame and plaster partitions, slab and asphalt tile floors, forced air heating, acoustical tile ceilings, asphalt paving in parking area, 2700 sq. ft. ARCHITECT: C. Paul Ulmer, San Bernardino. GENERAL CONTRACTOR: Jack Kennedy, San Bernardino.

STORE BLDG., Van Nuys area, Los Angeles county. I. Rosenus, Beverly Hills, owner. Frame and stucco store, composition and gravel roofing, concrete floors, interior plaster, acoustic tile ceilings, toilets, tapered steel girders, brick and stone veneer; 100x100 feet in area—$50,000. ENGINEER: George Novikoff, Los Angeles. GENERAL CONTRACTOR: Hahn-St. John, Van Nuys.

ELEMENTARY SCHOOL, Washington, Broderick, Yolo county. Washington Elementary School District, West Sacramento, owner. Frame and stucco building to provide facilities for administration, 13 classrooms, kitchen, multi-purpose room, toilet rooms — $346,399. ARCHITECT: Barovetto & Thomas, Sacramento. GENERAL CONTRACTOR: United Constn Co., Sacramento.

HIGH SCHOOL ADDN, Notre Dame, Van Nuys, Los Angeles county. Brothers of Holy Cross, Van Nuys, owner. 2-story brick masonry addition to present building; mission tile roof, slab and wood floors, plaster walls, acoustic tile ceilings, steel sash, terrazzo and ceramic tile, plumbing, electrical work; 58x160 feet in area. ARCHITECT: Barker & Ott, Los Angeles. GENERAL CONTRACTOR: Contracting Engineers Co., Los Angeles.

ELEMENTARY SCHOOL, Shallenberge, San Jose, Santa Clara county. San Jose Unified School District, owner. Structural steel and frame building, ventilators, tilt-up roof, plywood walls, concrete and asphalt tile floors, acoustical tile; 12 classrooms, administration facilities, multi-purpose room, 2 kindergartens, toilet rooms —$302,975. ARCHITECT: Kress, Goudie & Kress, San Jose. GENERAL CONTRACTOR: Hughes Constn. Co., San Jose.

ANIMAL FOOD FACTORY, Santa Clara. Animal Foods, Inc., Santa Clara, owner. 1 story structural steel frame, reinforced concrete tilt-up walls, wood roof, boiler, piping, 20,000 sq. ft. in area—$141,175. STRUCTURAL ENGINEER: John M. Sardis, San Francisco. GENERAL CONTRACTOR: Lew Jones Constn. Co., San Jose.

OFFICE BLDG., San Jose, Santa Clara county. Bradford Mfg. Co., Santa Clara, owner. 1 and part two story concrete block and frame construction, 5,000 sq. ft. floor space, $50,270. ARCHITECT: Kress, Goudie & Kress, San Jose. GENERAL CONTRACTOR: Oscar W. Meyer, San Jose.

SUNDAY SCHOOL & AUDITORIUM, Lynwood, Los Angeles county. First Church of the Nazarene, Lynwood, owner. 1-story frame and stucco, 40x95 ft. in

area, composition roofing, steel sash, galvanized iron gutters and downspouts, concrete slab and asphalt tile floor covering, acoustical tile ceiling, forced air heating, $30,000. ENGINEER: H. M. Hansen.

GOLF CLUB HOUSE, Municipal Golf Course, Fresno. City of Fresno, owner. New club house will contain restaurant, lounge, men's and women's locker rooms, $51,447. ARCHITECT: Allen Y. Lew, Fresno. GENERAL CONTRACTOR: R. G. Fisher, Fresno.

STORE REMODEL, San Francisco. S. H. Kress & Co., San Francisco, owner. Interior and exterior remodel, new store front, $390,661. ARCHITECT: Albert F. Roller, San Francisco. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

IN THE NEWS

ARCHITECT MOVES

Architect George Meu recently announced that offices are now located at 693 Mission Street in San Francisco, where he will engage in the general practice of architecture.

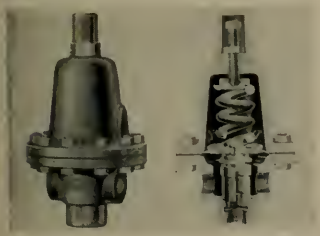
MEMORIAL HOSPITAL

Architect Gerald Matson of Eureka is completing drawings for construction of the Redwood Memorial Hospital in Fortuna, California.

The new hospital will be of 1 story, frame construction, according to plans announced by the Redwood Memorial Hospital Association officials.

BACK PRESSURE RELIEF VALVE

An all new type FR Back Pressure Relief Valve is announced by the A. W. Cash Valve Mfg. Co., in sizes from ½" to 2" in iron, bronze, stainless steel or monel bodies; suitable for pressures up to 400 psi.



Feature of this valve is the patented floating ring principle; by removing substantially all friction caused by drag of a piston and cylinder, found in ordinary valves, unusual sensitivity, high capacity, good closure, and outstanding performance are obtained. Note new floating ring is free to move laterally in any direction; valves are fully adjustable; have been thoroughly field tested. Complete data on product by writing manufacturer, Wabash & Morgan, Decatur, Ill.

ARCHITECT SELECTED

Architect Lawrence G. Thomson of Chico has been commissioned by the Red Bluff Elementary School District of Tehama county to design a new elementary school building to be built in the city of Red Bluff.

HEALTH CENTER

Architect Robert N. Eddy of Bakersfield has started working drawings on a new health center building to be erected in Bakersfield for the County of Kern.

The proposed building will be 1 story with part basement; reinforced concrete, steel roof trusses, steel sash, fire doors, glass doors, air conditioning, and will contain about 24,500 sq. ft. of floor area.

Estimated cost of the project is $422,000.

NEW JUNIOR HIGH SCHOOL

Architects Ferris and Erskine of Reno, Nevada, are preparing working drawings for construction of a new junior high school building in Reno, for the Reno School District No. 10.

The school will contain 30 classrooms, administration, library, gymnasium, multipurpose, kitchen, shops, and toilet rooms. Construction will be concrete block frame with structural steel.

Estimated cost is $750,000.

ARCHITECT'S ADDRESS

Architect F. Bourn Hayne, A.I.A., has changed his address from 320 Market Street, San Francisco, to P.O. Box 368, 41 Diablo Drive, Kentfield, Marin County, California.

ARCHITECT SELECTED

Architect Lawrence G. Thompson of Chico has been commissioned by the Placer Union High School and Junior College District of Auburn to draft plans for construction of a new Junior College building and High School building and to make additions and to remodel existing buildings.

KRAFTILE SETS SAFETY RECORD

On January 12th Kraftile Company of Niles, California, completed a full year of operation without a single lost-time accident, according to an announcement by C. W. Kraft, president.

During the year Kraftile operated a to-

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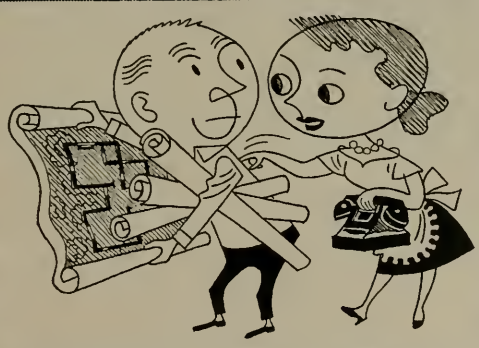
City.....

State.....



It's better to plan than patch (telephone facilities, that is)

People who are shopping for a new home like to feel that every modern convenience has been built into the house they select. Exposed wires, for example, are a dead give-away that telephone outlets were put into the house rather than planned into it. Yet it costs so little to put built-in telephone facilities in your plans.

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tal of 130,465 man-hours and the safety record was attributed to a combination of management emphasis and employee acceptance of the policy that "safety is everybody's business." The firm's safety program, in charge of L. R. Alt, vice-president in charge of production, includes a committee which meets each month to review any accident and study reports of Verne Wagner, safety inspector, who makes a weekly survey of the entire plant.

"The Company has long since proved that its emphasis on safe practices does far more than preserve lives," Kraft pointed. "It also results in lower costs for insurance and elimination of the direct costs of accidents, which frequently run as high as five times the amount of direct costs," he concluded.

APPOINTED MANAGER

Richard Whitney has been appointed Product Manager of Day & Night Division, Affiliated Gas Equipment, Inc., Monrovia, California plant.

He is a graduate of the University of Arizona and the University of Southern California.

ARCHITECT OPENS OFFICE

William B. McCormick, Architect, recently announced opening of offices at 465 Post Street, San Francisco, where he will engage in the general practice of architecture.

NEW AWNING OF FIBERGLAS

A new fiberglas awning designed to meet the exacting requirements of contemporary American architecture has been created by Raymond Loewy Associates, famous industrial designers.

The modern awning features a long low horizontal design flowing in gently curved lines to blend harmoniously with contemporary architectural concepts. It is also encased in a gleaming aluminum frame to create a crisp, modern finish completely devoid of exposed edges.

The newly designed awning is one of the Ray-O-Lite Corpn of America line and will be distributed by franchised manufacturers of the company as part of its expanded merchandising program. Complete information is available from Ray-O-Lite Corpn, Atlanta, Ga.

NORTHSIDE HIGH SCHOOL

Architects Scholer, Sakellar & Fuller, of Tucson, Arizona, are preparing drawings for the construction of a new Northside High School building in Tucson, for the Pima County Board of Supervisors. The new building will accommodate 1500 students and will have an auditorium to seat 950, gymnasium, 53 classrooms, large courtyards.

The entire project will contain some 210,000 sq. ft. of space and will cost $2,300,000.

REFINERY FACILITY

George M. Lindsey and Robert M. Lindsey, architects and associates of Los Angeles, have completed plans for the construction of complete refinery facilities near Manaus, Brazil, for Companhia De Petroleo Da Amazonia.

The project includes administration building, generator building, compressor building, factory, ethyl blending plant, truck filler dock, sewage disposal plant, and other buildings including a fore house.

The Southwestern Engineering Company of Los Angeles has been awarded the construction contract.

ARCHITECT SELECTED

Architect James P. Lockett of Visalia has been commissioned by the City of Visalia to design a new City Hall and Police Station to be built in the City of Visalia.

The new combination civic building will be 1 story in height; will contain 12,200 sq. ft. of floor space; will be of reinforced brick construction and will cost an estimated $125,000.

CHURCH BUILDING

Engineer Leo W. Ruth, Jr. of San Jose, Calif. is completing plans and specifications for the construction of a new church building in Hayward for the Temple De La Cruz Church.

The building will be of 1 story, with basement, frame and stucco construction with wood roof trusses, structural steel floor beams, and acoustical tile ceilings.

Estimated cost of the project is $100,000.

OFFICE BUILDING

Architect John S. Bolles of San Francisco is completing plans for the construction of a 1 story, 9,500 sq. ft. office building in Palo Alto for Scott Forman & Company of San Francisco.

Estimated cost of the building is $100,000.

SCHOOL BONDS

Voters of the Eureka Elementary School District, Eureka, California, approved issuance of school bonds at a special elec-

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tion, for construction of an addition to the Lincoln School in Eureka.

The firm of Masten, Hurd & Dick, architects of San Francisco, have been selected to design the work, which will be of frame and stucco construction.

LOS ANGELES HOME SHOW DATE ANNOUNCED

Carl F. Kraatz, managing director for the 1955 Los Angeles Home Show, announced the event would be held June 9 through 19 at the Pan Pacific Auditorium.

Sponsored each year by fourteen construction industry associations and the Chamber of Commerce, this will be the 10th anniversary of the show.

The theme of the Home Show will be "The One Great Show That Has Everything" and will feature a model home, new products, building materials, appliances and home furnishings, as well as many entertainment features.

KAWNEER ANNOUNCES EXECUTIVE CHANGES

Henry W. Zimmer, executive vice-president of The Kawneer Company, announced that company's operations will in the future be segregated into four product divisions, each headed by a general manager.

Managerial appointments include: Irving R. Seely, Administrative Vice-President and General Manager of the Architectural Products Division, which has plants in Niles, Michigan; Berekley, California; Lexington, Kentucky; and Toronto, Canada.

Wave B. Agler will serve as General Manager of the Aircraft Products Division; George H. Shevlin, Jr. continues as General Manager of the Appliance Products Division, and Stephen A. Furbacher has been named General Manager of the new Mill Products Division.

Zimmer points out that these "changes are the results of Kawneer's post-war expansion" into other areas of the metal manufacturing field.

TELECOM NEW SPEAKER PHONE

An amazing new development by Telecom, Inc., manufacturers of dial telephone intercommunications systems, is the new Speaker Phone, which offers for the first time, two-way communication between a loud speaker and all telephones in any of the Telecom automatic dial system.

The party called may talk back to the calling party by merely addressing the Speaker Phone, eliminating the nuisance of push-to-talk levers and buttons for either party. Only a single pair of wires is required instead of a bulky multi-pair cable. Complete information available from Telecom, Inc., 1019 Admiral Blvd., Kansas City 6, Mo.

DAIRY BARN

Architect Pierre Woodman of Ontario has completed drawings for construction of a sixty cow barn, milk sheds, and six corrals including fencing, mangers, water troughs, and hay sheds to be built near Ontario.

Construction will be frame with corrugated metal siding and roofing, slab and carborundum floors, stainless steel, cold rooms, electrical, concrete and plumbing.

ARCHITECT SELECTED

Architects Clark & Stromquist of Palo Alto have been commissioned by the Cupertino Elementary School District of Cupertino to draft plans and specifications for construction of five new elementary schools in the district.

Each school building will contain 16

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classrooms together with other facilities. Special funds have been raised in the amount of $2,270,000 for the project.

HOWE SCALE HAS A NEW WEIGHING UNIT

A streamlined automatic weighing unit which features a projection type of weight indication has been announced by the Howe Scale Company.

The exact weight is flashed on a large, crystal-clear wide angle "Teleview" screen for "instant accurate weighing at a glance." The new Howe self-contained weightograph incorporates the use of a precision chart on microfilm; the figures and gyrations are magnified by means of optical projection to 28 times their original size, and are reflected on the screen; visible under direct sunlight and at a distance.

Attractively finished in baked Hammerloid blue-gray finish, with chrome trim; available in bench style or tall column floor style; gross capacities from 31 lbs. to 2400 lbs. Complete data available from Howe Scale Company, Inc., Rutland, Vermont.

NEW BANK BUILDING

The Bank of America, San Francisco, announced recently the acquisition of property on El Camino Real in Redwood City where they will soon erect a new, modern bank building. Of 1 story, with mezzanine, the building will be of concrete construction and will cost an estimated $185,000.

ARCHITECT MOVES

The architectural offices of Peter Kump, A.I.A., have been moved to 530 Santa Cruz Avenue in Menlo Park, where Kump will continue in the general practice of architecture.

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WILLIAM ARILD JOHNSON, Architect

MARCH 1955

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COVER PICTURE

ARCHITECT'S HOME RESEMBLES LODGE

Mr. & Mrs. William Arild Johnson
Everett, Washington

Architect William Arild Johnson's home in the Woodway Park area of Everett, Washington, is an interesting study of the old and new, in design and materials.

In many ways this interesting home resembles a mountain lodge.

For complete story and more pictures of this architect's home see page 10.

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. EDITORIAL NOTES .

HOUSING

The question as to whether the housing situation represents a huge bubble about to burst, or a long term program of meeting the housing needs of the nation, is being raised more frequently as residential construction activity continues its tenth year of expansion.

The current rate of residential building surpasses that of 1954, when one million two hundred thousand dwellings were built throughout the nation.

The answer to this question is revealing itself in contradictory views. Some authorities fear that home-building will be regulated by economic forces coming to bear on it. Others feel that these economic forces will not be able to hold back a reckless over-expansion.

Observation indicates that any serious over-expansion would be checked by a moderate rise in the money rate and costs and by the slow pace at which water and sewage services can be supplied in the suburban areas.

Mortgage funds will continue to be available in average quantity and would dry-up at the first indication of danger. Houses will be constructed in about the same ratio that households are developed and for the immediate present the housing schedule of 1954 will extend well into 1955.

* * *

Oil is used as a fuel in 550,000 schools, office buildings, factories and other types of commercial-industrial buildings.

* * *

A MUSEUM OF ARCHITECTURE

The possibilities of a Museum of Architecture has probably been given passing consideration by any number of people identified in one way or another with the architectural profession, and of course few Museum's of Art are without direct participation in the field of architecture.

It remained, however, for Mrs. Louise Mendelsohn, wife of the late Eric Mendelsohn, to institute in tangible form the foundation of a Museum of Architecture independent of any existing museums which would inspire the students of all branches of Art.

Such a Museum would, in the thinking of Mrs. Mendelsohn, "awaken the people to a responsiblility toward their planning of cities and their buildings. It would be a constructive center much needed in a time when so many destructive ideas threaten the creative ones. The starting point of such a project should be the works of our time. From them, occidental architectural development should be traced back to the very beginnings of buildings. Paralleling this, oriental architectural development should be demonstrated.

"Out of the dynamic activities of contemporary Architecture as they compare with the documents of former Cultures, we should find encouragement to believe that this is, despite all difficulties, a constructive period. Architecture not only reflects the values of Civilization but makes positive contributions to its growth.

During the great epochs of civilization, painting and sculptural works were of a unity with Architecture and it was only during the Italian Renaissance that a separation took place. Since then the so-called decorative arts, painting and sculpture, started to live their own lives.

Today's evolution of a new style in architecture, represents a new approach to life and with it the appearance of new structural materials which has added wider interest in architecture.

The proposal of a Museum of Architecture incorporates an architectural designed building significant with modern Architecture in which would be housed for posterity the vast material of sketches, drawings and plans that comprise today's architecture.

The suggestion advanced by Mrs. Mendelsohn contains thought worthy of very careful consideration and appears to offer an opportunity for the truly great leaders of the architectural profession to draw together under one effort a perpetual public recognition and appreciation of Architecture.

* * *

The chief distaster which could befall our age is that individual men should cease to think as individuals and should become merely the thought cells of prejudice.

* * *

HARD TO ACHIEVE, EASY TO LOSE

A high rate of productivity is a rare achievement.

Productivity, as we know it, has been developed in only a handful of western nations, and there very slowly. Eastern nations have never learned its secret. And in recent years, under socialism, productivity has declined even in Europe and Britain where it was born. The London Economist, trying to put its finger on what had gone wrong with British productivity in the recent socialist regime, commented:

"The human donkey, requires either a carrot in front or a stick behind to goad it into activity."

Even when a nation starts up the road of economic progress, there is no guarante that all of its people will benefit. Egypt's rulers squandered their nation's resources on the pyramids, while Napoleon impoverished France with endless wars.

History teaches us that it is possible, and indeed easy, to destroy the springs of progress in a society, and that almost all past civilizations have done so.

Like a precious jewel, productivity is difficult to gain, and easy to lose.

California State Capitol Annex Building in Sacramento, erected 1951. Cost, $7,500,000.

SUPERIOR WOOD FINISHES

Architect—State Division of Architecture
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NEWS and COMMENT ON ART

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is presenting an outstanding group of exhibitions and special events during the month.

EXHIBITIONS: The special exhibition of Japanese Architecture and the Japanese Tradition—Its Lessons for Western Living and the Arts, will be continued until March 27th; an exhibit of Israeli Printmakers; the Rental Gallery; and the Museum Collections will also highlight the month's attractions.

EVENTS: Concerts, Wednesday and Friday evenings; Lecture Tours of the Museum each Sunday at 3 o'clock; Lecture-Film program each Tuesday; and classes in art, the Sketch Club and Painting Class, each Friday evening at 7:30, and the Children's Class each Saturday morning at 10 o'clock.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering the following special exhibitions and events during March:

EXHIBITIONS: Modern Movement in Italy, an exhibit of Architecture and Design; Contemporary Italian Paintings, from the Galleria Dell O'Belisco in

(See page 34)

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park, San Francisco

"Young Mother"
by
PIETER DE HOOCH

Representative of the entire golden age of Dutch painting. It is one of the 39 Masterpieces contained in the Samuel H. Kress Collection and one of the paintings especially acquired for the deYoung Museum by Mr. Rush H. Kress, vice-president of the Kress Foundation.

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Hollow upright posts and hollow bases accommodate wiring. All WeberWall panels intermember with any thickness of steel walls or walls of other material. In this job, solid core wood doors were used in conformance with architectural specifications. Steel doors 1¾" thick are also available. Glass panels in steel partitions (not shown here) are of patented construction and are dry glazed. Various thicknesses of clear or opaque glass are also available.

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TECHNICALLY SPEAKING

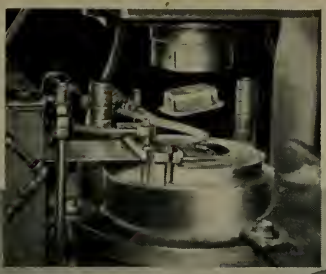
WOODWORK INSTITUTE OF CALIFORNIA

The Woodwork Institute of California performs one of its most valuable functions by rendering a service that is, we believe, unique in the field of voluntary cooperative effort. This service is of direct benefit to the architect-engineer profession in giving to them, without charge, authoritative standards of millwork and technical data upon which they may rely with confidence. This service is, also, of value and benefit to other segments of the California and Western States building industry besides that of strictly millwork. For example, and as referred to in our article in the January issue of this publication, the writing of a "Manual of Millwork," a book that has been adopted by all the responsible agencies as to reliable reference for a definition of the scope and the material and machining standards for architectural millwork.

However, it soon became apparent that woodwork is not a static field of industry, and that new problems and new technical information are constantly created. Further, it was also plain that a person not in daily contact with these problems and advances could not possibly judge them nor pass on the proper information to the architect-engineer field. So the Technical Committee of the Woodwork Institute was created. It is made up of six men who work in representative mills throughout the State. They are working men—draftsmen, plant superintendents, estimators and designers whose combined experiences in this exacting field totals well over 100 years. Through the full time staff of W.I.C. and through the problems and experiences that develop daily on the job, the Technical Committee is presented with the most immediate situations where the architectural and engineering professions need assistance. The problem, thus chosen, is carefully examined, divided into its several components and then the Committee wholeheartedly attacks the situation. Two-day work sessions are held frequently enough until the particular problem is satisfactorily solved. As a concrete example, take the awning type sash, a multiple operating sash commonly used in school and commercial construction, was not filling the bill. Architects consistently expressed disagreement with the several parties involved in the manufacture and installation of the sash. In numerous instances one firm made the frames, another the sash, the general contractor put in the frames, someone else installed the hardware, then the painters had their job as well. The problem was dumped in the lap of the Technical Committee of W.I.C. and they aggressively tackled it. Following each work-session the members returned to their homes and individually worked on special parts of the problem assigned to them. At the group meetings these findings were examined, criticized, corrected and fitted into the whole. The result? A UNITIZED AWNING SASH was completely developed which will soon be introduced to the architect-engineer profession and the building industry. Unlike any other awning sash the hardware is contained entirely within the 2¼" thickness of the sash and frame. When the sash are closed there are three points of contact continuously along the jamb for complete weatherproofing. The entire unit is designed to be assembled in the mill with the hardware included. It may be prefinished and glazed prior to shipment and is delivered ready for installation. Unit sizes have been established in order to promote uniform stock prices, however there is full flexibility in sizes and operating arrangements. Architects, draftsmen, construction engineers and others who have seen a working model of this UNITIZED awning sash, all were enthused about its features and expressed the opinion that it is a real contribution to the building trades in a window of this type.

The number of man hours put into the research, detailing, writing and re-writing by the W.I.C. six-man Technical Committee to solve the intricate problem of awning type sash, would amaze you. Suffice to report that they, and the Woodwork Institute of California are glad to, once again, have been able to perform an unselfish service to the millwork industry as well as for the architect-engineer profession. Having this problem behind them, the Technical Committee took on another one, far greater and tougher than anything attacked so far—casework for schools. Our next issue will bring you the full story.

NOTE: This is the third of a series of articles dealing with the technical phases of service performed by the Woodwork Institute of California. Subsequent articles will deal with specific problems of this portion of the vast Construction industry of the West.



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ARCHITECTS HOME

Mr. and Mrs.
William Arild Johnson

EVERETT, WASHINGTON

In many respects the home of Mr. and Mrs. William Arild Johnson in Woodway Park, near Everett, Washington, is reminiscent of a mountain hunting lodge as it nestles in its dense screen of giant evergreens and native leaf trees, and the liberal addition of materials such as slate, granite, wrought iron and grass cloth. Northwest mountains and beaches produced more than twenty tons of granite for this home.

It has a pleasing closeness to its

A view of a portion of the living room in the residence of Mr. and Mrs. William Arild Johnson—showing the "open" living area above.

marble ... good for shariwaggi?*

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***Shariwaggi:** "A word from India describing the art of picturesque composition in combining new architecture with old so as to enhance both". Architectural Forum. February, 1954.

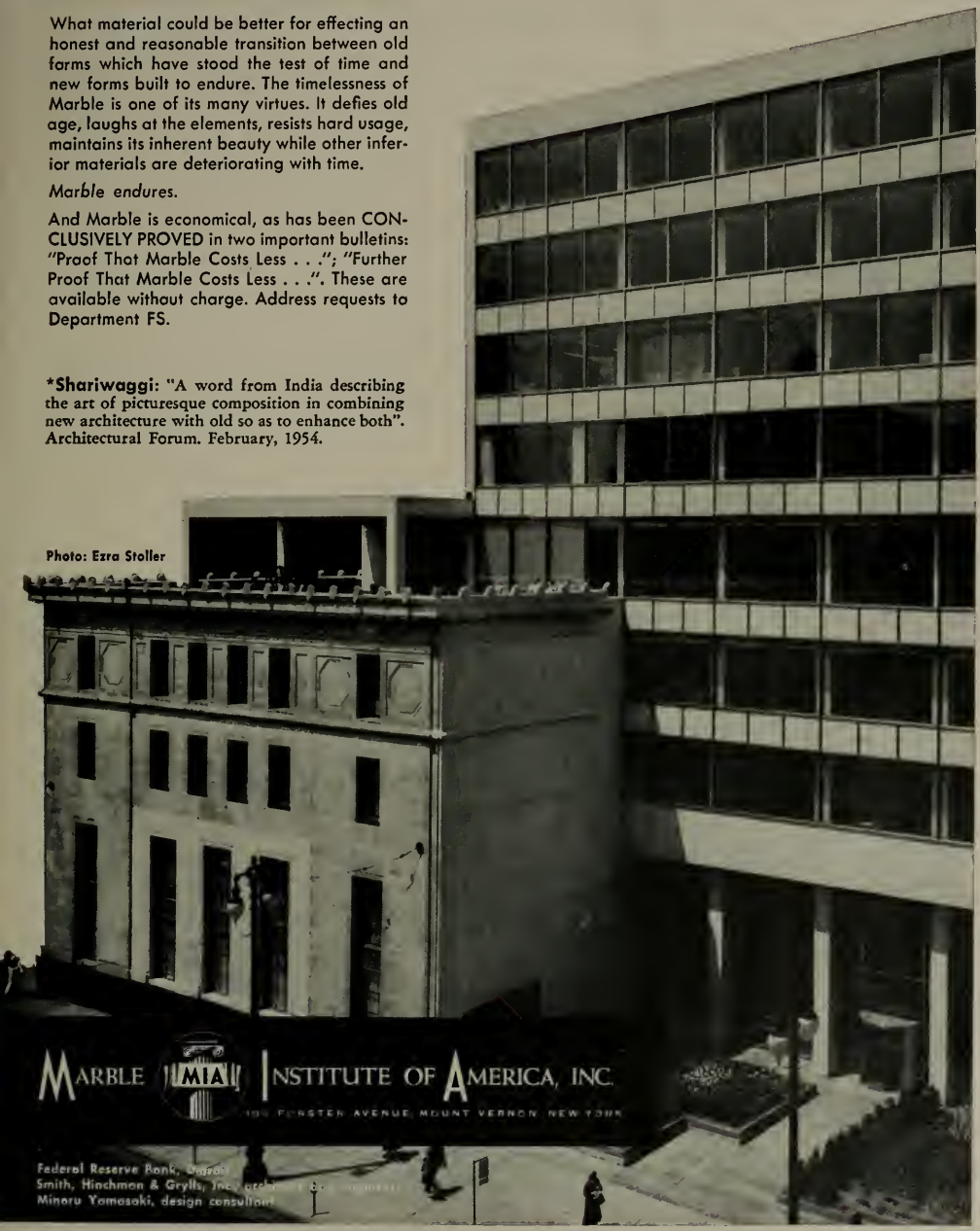
Photo: Ezra Stoller
MARBLE MIA INSTITUTE OF AMERICA, INC.
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Minoru Yamasaki, design consultant

setting through a two-level, floor to rafter wall of glass which frames a section of the surrounding woodland.

One of the Pacific Northwest's outstanding Architect's, William Arild Johnson, naturally designed the home himself and points out its functional use is for a family of two, and is not intended for use where there are growing children. Thus the general arrangement is very open, with as little conventional wall space used as is possible.

Masonry plays an exceptionally important role in the character of the home, for in addition to the massive stone fireplace wall, there is a kitchen wall of eighty-five year old hand made brick which the Johnsons acquired at the time one of the local school buildings was razed.

The kitchen is an interesting blend of the new and the old, for in contrast to the old brick wall and very appropriate pine built-in cabinets with wrought iron hardware, this unusual kitchen is equipped with modern stainless steel cooking units and sinks, and a fireplace-style built-in barbecue. A large work counter, which is topped with pink Tennessee marble, serves as a division of the room.

Bar-height, this spacious divider counter is multi-purpose in its uses. With attractive wrought iron chairback stools, it serves as a breakfast area, is well placed to be used as a serving counter when the Johnsons are entertaining guests, and can be used to advantage as a cutting table for sewing.

Screened from the kitchen proper by a drapery of

LIVING ROOM

Decorative motif bears out theme of mountain lodge.

Stairway at left to upper living area.

Draw curtains at end of room open into spectacular view.

ABOVE—view of kitchen, looking towards dining area.

BELOW—Details of kitchen, showing cabinets, stove, broiler.

blue and white in a stylized provincial pattern, an alcove is devoted to pantry and utility space. To add daytime light to the kitchen there is a high studio window over the sink. Since the home is constructed over a concrete slab, the kitchen is floored with waffle-based vinyl tile in a cream flecked with red color combination, and which has considerable resilience.

The separation between the kitchen and the combination dining-living area, is marked by an open egg crate style shelving with the top member extending across the opening to the huge fireplace wall of stone to form an archway for plants and other desired decorations.

The living room area itself is slate-floored with a sunken cozy-area around the spacious fireplace covered with sisal matting. A group of built-in sofas facing the fireplace area, is backed by a planter, built-in book shelves and numerous utility cabinets. Directly above this area is a balcony-den-guest room reached by a winding stairway of birch slabs centered on a curving black wrought iron pipe, and with a pipe railing. The semi-mezzanine type utility area is cork-floor covered to minimize noise.

The upholstered furniture in the cozy-area is all custom designed, with neutral linen covering. Chairs and sofas in other parts of the room are Saaranin, with

LIVING ROOM . . . stairway at right leads to exposed-end living area above. Draw curtains at end of room close off excessive light in daytime and take an out-door appearance when opened at night. Open, exposed overhead beams, place emphasis on style design.

black and white rough wool and nylon fabrics. With this grouping the Johnsons use a free form of glass coffee table and a white bearskin rug.

The usual dining table is a circle of natural birch set on a black lacquered tripod base. Chairs, also Saaranin, are black rough wool over foam rubber, on an aluminum framework.

Carrying out the feeling of space in the house, the wall between the living room and the bed room has a clerestory window strip which cen be screened when necessary, by traverse curtains.

With the exception of the general dining area, where grass-cloth has been used, area walls in the living and kitchen space are of fir plywood which have been stained a muted cedar red. Sloping cedar ceilings and exposed beams are of a similar color.

Giving the home color as well as space continuity, the bedroom walls are painted in this same shade. The wall backing the built-in bed, is papered in coral and charcoal, and the bed-spread and draperies are also done in coral, but in antique stain.

The sleeping area is set apart from a double dressing area by use of a wardrobe unit. The bath, continuing the bed-room color decoration, is compartmentized.

The future plans for the Johnsons in further developing their home, is construction of a terrace which will consist of wood-slices at the front of the residence, and a similar motif designed "guest-house."

CIRCULAR STAIRWAY

Against stone wall leads to mezzanine type area with open end which can be used for wide variety of purposes.

RESIDENCE of Mr. and Mrs. B. S. Cole. John L. Reynolds, Architect

BEAUTIFUL ROOMS TO LIVE IN

WESTERN ARCHITECTURE

By ARTHUR W. PRIAULX

It was Frank Lloyd Wright who said, "The most desirable work of art in modern times is a beautiful living room, or, let's say, a beautiful room to live in."

Western architects agree with the Elder Wright in establishing beauty as one of the prerequisites for a modern room in which to live, and they have created some of the most dramatic, attractive and livable designs conceived by man.

In talking about living rooms, Mr. Wright undoubtedly intended the broader concept of living areas as we are learning to know them today, which would include not only the formalized living room, but the very fine variety of family living areas so popular in western homes.

Our regional architects have kept faith with the requirement for beauty in these rooms, but in addi-

tion, have achieved a spectacular variety of designs, decorative schemes, highly functional floor plans, exciting storage walls and combinations of natural textures and colorings.

The emphasis is on living—family living—in the contemporary western home, with special attention given to the peculiar tastes, needs, hobbies and indoor activities of each member of the household. Some of the finest examples of outstanding design and room planning appear in these family living areas.

Revived interest in self entertainment, centering around television and high-fidelity, has created a need for an area in the home around which the life of the family revolves. The stay-at-home habits of families have influenced design to accommodate the broadening and changing interests of both adults and children. The family is rediscovering what our pioneer forefathers took for granted, that family life can be fun and it can be many-faceted.

Reawakened interest in hobbies, reading, indoor games and sports and entertaining at home have all presented special problems for the architect who is called upon to design the perfect family room. Each one has to be different, for no two families have the same interests and the family-living room should be tailor-made for each household.

How wide a range of activities can be compressed into a family room? A look into some northwest homes will give a few of the answers to this question. A compact sewing wall which folds up into an attractive

HOBBY SECTION in the home of Mr. and Mrs. Orlo Bagley of Cottage Grove, Oregon—helps make the family room one of the liveliest parts of the home. Guns and trophies give the western and masculine touch.

cabinet when not in use has been included in the family area of the Orlo Bagley home in Cottage Grove, Oregon. See photo on page 19. Mrs. Bagley's hobby is sewing and she has brought her hobby along with her in the family living area. In another part of this same area is a library and glassed-in gun collection which give expression to Mr. Bagley's interests and a place for his hobbies.

Some living areas started out to be casual play rooms, but have become so much a part of the family's life, members naturally gravitate there when they are home, and not eating or sleeping. Such a room was designed by Wilmsen and Endicott, Eugene architects, for the H. Dean Pape home. See photo on page 22. By clever planning, the room is designed to operate on a two-shift basis, with the small fry taking over the daylight hours and the adults after nightfall. All evidence of daylight occupants disappears with ease. A series of floor-level compartments beneath a wall encircling builtin lounge provide storage for all games, toys and kid trivia. When they are shoved back into their storage space, matching cabinet doors shut them from sight. If the adults wish some refreshments at night, a tiny bar in one corner is opened up. Games, cards, books and adult play stuff is kept out of reach of the young ones during their play period.

And speaking of bars, Architect Lawrence Rice has designed a clever disappearing oasis in the Cy Goldberg home at Longview, Washington. See photo on page 18. This refreshment center, equipped with tiny sink looks like part of a lovely wall of paneled birch along one side of the family room. A waist high panel slides up, and the lower panel opens on its hinges to admit one custodian into this miniature domain, and a counter tops off the lower panel. Shelves above the sink and mixing table hold an assortment of supplies.

Residence

Mr. and Mrs. Cy Goldberg

Longview, Washington

This cozy, neatly designed bar is a step-saving oasis area which enables the host to visit with guests while entertaining. It folds out of sight when not in use.

Lawrence Rice,

Architect

Travel to the kitchen is reduced, and the host remains with his guests while satisfying their thirst or preparing treats for them.

With their children grown and married, the family room needs of Mr. and Mrs. B. S. Cole of Eugene revolved more around adult entertaining and husband-and-wife living. See photo on page 16. Architect John L. Reynolds solved the living area problem for the Coles by designing the heart of this home in an open area, with only a room divider between dining, living and kitchen areas. The room divider holds the minimum storage requirements for this family. It has been designed with some imagination in an L-shape. It forms the frame and backing on the living room side for a custom-made davenport of heroic size. A wide counter top provides a surface for lamps, potted plants, decorative glass and porcelain. Card tables slip out of sight into narrow slits at the end. Tiny cabinets on each end, close to the floor, house books and toys when the grandchildren come to visit. A series of cleverly conceived cabinets provide storage for linen and silverware on the dining room side. This simple but striking installation is built of west coast hemlock panel stock to match the wall paneling throughout this open area and has been finished with clear rez to retain the natural golden color of the wood.

The Norman Richards family room in their Cottage Grove, Oregon, home, probably comes as close to being a typical example of this contemporary styling and multi-use inclusion. See photo on page 24. Designed by Architect Thomas Balshizer, its walls are an amazing telescoping into close fitting cabinets of space for

SEWING CORNER in the home of Mr. and Mrs. Orlo Bagley of Cottage Grove, Oregon—is just one of many new activities moved into the household headquarters where adults and young find a place for their hobbies and playtime hours.

A wainscoting wall section in the home of Mr. and Mrs. Sam Rubenstein tips up to form this remarkable buffet table, a real space saver in a busy family room.
Thomas A. Balshizer, Architect.

all of the varied activities of this family. Built also of west coast hemlock, this room has a warmth and friendliness which typifies most of these creations. The natural textures and soft tones of the clear finished hemlock help develop this atmosphere of hospitality. This room provides a work area for the family to engage in its several hobbies. For these camera fans, cabinet storage holds projection equipment and films have their own special compartments. A novel feature of this room is the miniature bar built into a peninsula which serves also as a suggestion of a divider to create a more cozy lounging corner adjoining the stone-faced fireplace. Included is a desk and tiny office for Mrs. Richards, television viewing from a set built into the wall, neat storage cabinets for all manner of games, cards, toys and handicraft hobbies. This room is rather large, like most family living rooms should be, and allows for departmentalization of activities, so that several groups or individuals in the family may be engaged in their own area of interest at the same time.

Another excellent example of division of space or allocation of floor area to permit diversified activity at the same time in the family room, was developed with some ingenuity by Architect Thomas Balshizer in another of his creations in the Eugene, Oregon area, in the Sam Rubenstein home. See photo on page 22. Beneath the stairs along one wall of this all-purpose room he designed a series of inset bookcases, which flush with the wall, and contain a variety of reading material for both adults and young. Along this same wall, and in a small closet-size spot developed where the beneath-stairs space has ample head room, is a compact bar with the counter built on right angles to give a little more room for the person preparing refreshments.

In the same home, Architect Balshizer has designed

another special purpose room corner from which buffet lunches and dinners can be partially prepared and served. This portion of the room is wainscoted and a ten-foot section of the wainscot tips up to form a table. The drop legs fold back when the wall section is set back into place. It is hinged at the inside top. This wainscoting is vertical grain Douglas fir panels and when the buffet serving table is not in use it locks into place in the wall with a press release catch lock and is so finely matched the joints are not visible. A rather interesting builtin buffet has been designed into the wall adjoining this buffet wall section installed to make a cozy corner of work interest where the hostess can busy herself without interfering with her guests, but she is still part of the conversation group.

Not all of the interesting family rooms were designed when the home was built. There are many attractive living areas which have been created by remodeling older homes. In some cases these all-purpose living areas have been built within the frame of old carriage houses or garages no longer used. A prime example of what intelligently planned remodeling can develop is to be found in the Judd Klingberg home in Longview, Washington. See photo on page 23. One of the fine old homes in that quarter-century-old city, when the Klingbergs bought it they decided they needed a play and recreation area for their growing family of childen. They panelled an old garage with western red cedar, built a fireplace, barbecue pit, builtin bookcases and a place for television and cover-

Even dead space in the basement can be converted into an all-purpose room with a little attention given to planning. This converted basement room in the home of Mr. and Mrs. D. G. Tibbetts of Portland, Oregon, combines recreation with hobby space facilities.

H. Dean Pape
Residence
Eugene, Oregon

Child play gear is swept back in easy-to-reach floor level compartments when this family room is readied for the second shift of adults.

Wilmsen & Endicott,
Architects

Special use corners like this library, of the refreshment bar in the background in the home of Mr. and Mrs. Sam Rubenstein, solve traffic problems in larger family rooms and make it possible for large crowds to be handled with ease.

ed the cement floor with rubber tile. The result is a perfectly enchanting family headquarters which exerts a sort of lodestone pull on the family when they are home. It is such a popular spot that the children use it as a study room.

Still other family living rooms are being realized by households with limited number of rooms, by remodelling unused basement areas. One of the most interesting of these basement recreation rooms is in the D. G. Tibbetts home in Portland. See photo on page 21. The central room was paneled in Douglas fir with a bar in one end of the room and builtin bookshelves in the opposite end. A tiny dark room was built alongside the bar and a matching space on the other side of the recessed bar is a walkin storage for records and games. The television set has been left mobile so it can be moved to accommodate any size group.

Most of these family living rooms are beautiful, and all of them are highly functional and original. As in other aspects of contemporary home design, where the architect has had some challenge and has been given some opportunity and freedom, these new living areas are showplaces of imaginative creation. They may range from quiet splendor to the breathtaking spectacular, from modest and adequate to unbelievable luxury. They may feature the lovely grain and texture of native western woods, like Douglas fir, western red cedar, ponderosa pine or west coast hemlock, or they may be sleek in mahogany, birch or gum wood. They may be subdued or brilliant. In one, color may domi-

Home of Mr. and Mrs. Judd Klingberg, Longview, Washington, shows that in remodeling an older home many opportunities present themselves for getting a family room out of unused space. This attractive headquarters for grown-ups and children was once a garage.

nate, and in others the architect may depend on studied use of texture for effect, or line and form.

Because the architect designs a house for his clients, the particular interests of those clients and much of their thinking will find its way into the ultimate design of their home. These interests will be as up-to-date as television and supersonic speed, and at even pace with the changing social habits of these families. The design, too, will be influenced more or less by what others are doing,. Thus, the family room, is a product of changing social habits of the family. Young and old alike stayed home to watch television when it was new, discovered generally and to their amazement they could have more fun at home than they had ever imagined. So homes are being designed today to live in, and to live in by today's standards.

Beauty and exciting ship-like compactness highlight this typical family room in the home of Mr. and Mrs. Norman Richards of Cottage Grave, Oregon. The many features, designed by Architect Thomas Balshizer, offer appeal to young and adults in the home.

CHEMICAL PROCESSING PLANT

SUNNYVALE, CALIFORNIA

JOHN S. BOLES, A.I.A. Architect

CHACE & CHIN, Structural Engineers LYLE PATTON, Electrical Engineer

HILP & RHODES, General Contractors

A $3,000,000 processing plant is now under construction on Kifer Road, Sunnyvale, California, for the West Coast Division of R. M. Hollingshead Corporation of New Jersey, and represents the first major expansion of the firm on the West Coast.

The building and processing work has been designed under the direction of R. M. Hollingshead III, by John S. Bolles, A.I.A., architect of San Francisco.

Part of the structure employs the unusual application of tilt-up panels, welded in place in the multi-story chemical mixing tower.

In order to provide the best insured ratings possible, one complete wall of the mixing area is designed as a blow-out panel, which serves also as a colorful feature of the exterior.

The plant, while still under construction, has received considerable national recognition.

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WASHINGTON STATE CHAPTER

"Plastics . . . Industry-Wide" was the subject of a talk at the March meeting by Ted Lindforth of Rohm & Haas Company, Philadelphia. The speaker displayed a number of new plastic products including a plastic sun-angle monitored window.

John Cowman of the Industrial Plastics Manufacturing Company of Seattle, also spoke on the subject of plastics and discussed the "color" phase of the material as applied to floor coverings, roof deck materials, down spouts and other building products where color is a factor.

New Members: Thomas Albert Smith, Corporate Member; Norman H. Olsen, Bellingham, Associate Membership; Kurt W. Karmin, Student Associate, and Clifford B. Dobson has transferred his membership from Oklahoma City.

PASADENA CHAPTER

The March meeting was a joint meeting with the Producers Council of Southern California, with the program devoted to creating a better understanding between the two organizations, their objectives and opportunities to serve the construction industry.

WASHINGTON SEMINARS ON ARCHITECTURAL PRACTICE

The Professional Information Committee of the Washington State Chapter, A.I.A., has announced a series of Seminars on Architectural Practice which is open to members and non-members of the A.I.A. as a preparation for individual practice.

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Producers' Council—Northern California Chapter (See Special Page)

The Seminars will be held each Monday night for six weeks from 6:30 to 8:30.

Subjects scheduled for discussion include: "The Architect and The Client," "Office Practice," "Execution of the Work," "Letting Contracts," "The Architect and Law," and "Standards of Professional Practice."

The series has been arranged under the supervision of Albert O. Bumgardner and Aaron D. Freed.

CALIFORNIA COUNCIL OF ARCHITECTS

Henry L. Wright of Los Angeles, a partner in Kistner, Wright & Wright, architects and engineers, was elected president of the California Council of Architects at the organization's annual meeting in Balboa.

Other newly elected officers include John Lyon Reid, San Francisco, Vice-President; C. J. Deasy, Los Angeles, secretary; and John Bomberger, Modesto, treasurer. Walter Stromquist of Palo Alto was named to serve on a five-man administrative committee which includes the officers.

Wright succeeds Malcolm Reynolds of Oakland.

SOUTHERN CALIFORNIA CHAPTER

A tour of the Webber Showcase and Fixture Company, Inc. comprised the March meeting.

Following a prime rib dinner at the Company's plant at 5725 Avalon Blvd., Los Angeles, a program of slide films in color and tour of the 16 acre plant was completed.

President William Glen Balch has announced a number of committees for the new year including Lester Hibbard, Building Code; Joe Jordan, By-Laws; John J. Landon, Investment Advisor; Cassatt Griffin, Examination Service; Thomas Russell, Awards; Ray Ziegler, Membership; and Robert Boner, Legislation.

ORANGE COUNTY CHAPTER

President Gates W. Burrows has announced a number of Committee appointments for the ensuing year.

Membership, William E. Blurock, Chairman and James G. Chinn and Gordon F. Powers; Practice of Architecture, Willard T. Jordan, Chairman and Rumont W. Hougan; Legislation, Raymond W. Johnson, Chairman and Paul O. Davis and Philmer J. Ellerbroek; Public Relations, Everett E. Parks, Chairman, Marvin W. Renfro, Ray Johnson and Maurice L. Wilks.

Special Committees include Chapter By-Laws, Charles A. Hunter, Chairman, Everett E. Parks and Richard H. Pleger; Program, George Lind, Chairman, Norman Hunter and George Koteles; and Bulletin, Rumont W. Hougan, Chairman, Kermit P. Dorius, Donald M. Williamson and Oscar W. Lounderback, Jr.

ARCHITECTS PRACTICE ACT UPHELD BY COURT DECISION

The Appellate Department of the Superior Court of the State of California, San Diego, upheld the constitutionality of the Architects Practice Act recently in reversing a decision of the trial court ordering a dismissal of charges brought against John Lloyd Wright vs the People of the State of California.

The People's complaint charged that Wright advertised as an architect and agreed with the owner to design and execute and furnish plans for a building and failed to notify the owner in writing that he was not an architect licensed by the State of California.

WITH THE ENGINEERS

Structural Engineers Association of California

G. A. Sedgwick, President (San Francisco); C. M. Herd, Vice-President (Sacramento); James L. Stratta, Secy-Treas. Directors, Ben Benioff, Ernest D. Francis, C. M. Herd, Harold Omstead, Michael V. Pregnoff, G. A. Sedwick, Joseph Sheffet, James L. Stratta, J. G. Wright, William T. Wright. Office of Secy., 140 Geary St., San Francisco 8.

Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy-Treas. Directors, C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers
Los Angeles Section

Louis J. Alexander, President; Nathan D. Whitman, Jr., Vice-President; David L. Narver, Jr., Vice-President; Jack E. McGee, Secretary; Gilbert W. Outland, Treasurer. Directors: Trent R. Dames and Sterling S. Green. Office of Sec'y, 1201 E. California St., Pasadena 6.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

The Structural Engineers Association of Northern California meeting held on March 1st was sponsored by the American Institute of Timber Construction, an organization composed of the principal timber fabricators throughout the United States. Local members of the Institute are Associated Wood Products, Berkeley; Standard Structures of San Rafael; and Timber Structures, Inc. of California, of Richmond.

President Howard Schirmer introduced the first speaker, Mr. Frank J. Hanrahan, Executive Vice-President of the A.I.T.C. Mr. Hanrahan was for 16 years chief engineer of National Lumber Manufacturers Association, and as such was largely responsible for much engineering literature, notably "National Design Specifications for Stress Grade Lumber and its Fastenings." He told of the progress of A.I.T.C. in the three years it has been established, and in particular cited the "Timber Construction Standards" which has already been published and widely distributed to the construction industry. He also told of the almost completed "Manuel of Truss Design," the work of the Fire Safety and Insurance Committee with fire insurance rating bureaus, and of the Building Code Committee work.

The second speaker, Ward Mayer, who was the first president of A.I.T.C., and is now a director of the Institute, is General Manager of Timber Structures, Inc., Portland, Oregon. In his talk, illustrated by slides, he described some of the recent outstanding projects in which engineered timber was utilized. Noteworthy among the projects was the Westchester Municipal Hangar, in which timber bowstring trusses with glulam chords spanned 250 ft. Other interesting projects included the arch centering for the Dunsmuir Bridge on Highway 99, and the timber bents used to support temporary aluminum construction truss on the Richmond-San Rafael Bridge. Mr. Mayer was assisted in his presentation by MacGregor Graham of Timber Structures, Inc. of California.

Frank B. Benzon, President and General Manager of Timber Structures, Inc. of California, and the newly elected President of A.I.T.C. spoke next. He earnestly requested the cooperation of the structural engineers in maintaining the highest standards of design and construction in the field of engineered timber. In his talk he pointed out that adherence to A.I.T.C. Standards as a minimum depended upon the ability of the structural engineer on the project to firmly resist any attempts to depart from these minimums. With the full support of engineers and architects, the Institute can provide the construction industry with sound and economical engineered timber construction.

Also shown was a colored sound motion picture produced by Timber Engineering Company entitled "Engineered Timber," depicting many ways in which timber construction was utilized in recent construction projects. It also illustrated a variety of uses for the several types of TECO timber connectors which have done much to make modern timber design possible.

AMERICAN SOCIETY FOR METALS PUGET SOUND CHAPTER

The February meeting of the Puget Sound Chapter, American Society for Metals, was held jointly with the Seattle Chapter of the American Society for Testing Materials. Mr. R. J. Painter, Executive Secretary, ASTM, presented a short coffee talk on "Cooperation in Materials, Research and Standards." Mr. Painter explained that while the ASTM is looked upon primarily as a standards organization, it plays a great part in coordinating research and standardization among the various industries, trade groups, professional societies and governmental agencies. The ASTM is spearheading a drive to standardize nomenclature so that engineers in all fields will be able to easily understand one another. Committees have also been set up to coordinate industry and government standards.

The speaker of the evening was Mr. Norman L. Mochel, President of the ASTM. He presented an interesting and condensed talk on "Power and Materials, Now and in the Future." Mr. Mochel is Manager,

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Sec.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Sec'y—548 S. Spring St., Los Angeles.

Structural Engineers Association of
Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

Metallurgical Engineering, Westinghouse Electric Corporation. By means of excellent graphs and charts, Mr. Mochel explained the relationships of power consumption versus power generating capacity of the United States now and in the future. He estimates that 10,000 kilowatt hours per year of electricity will be required for each household within a relatively few years, and he also pointed out that the only commodity in the U. S. that is going down in price as consumption increases is electricity. The reduced cost is due entirely to technological advances. Mr. Mochel then explained the advances over the past fifty years in steam turbine construction which resulted in increased compactness and production capacity per square foot of floor space, besides being more pleasing to the eye. Steam turbine generators of 30,000 to 300,000 KW are now being made which operate on pressures up to 5,000 psig and temperatures to 1200° F. Mr. Mochel emphasized that continued improvement in high temparature metals used in turbines is required to keep pace with the speedy advances being made technologically.

FEMINEERS

The FEMINEERS lured in Spring with a fashion-show luncheon at the Mira Vista Country Club in El Cerrito on Wednesday, March 16.

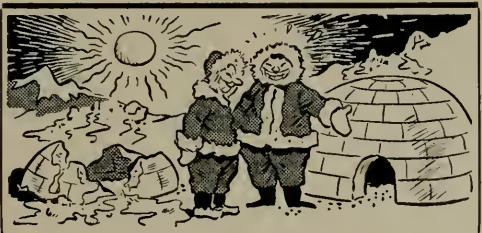
The theme of the show was "Portrait of Spring." The spring and summer line of the Mademoiselle Shop in Berkeley were modeled by the FEMINEERS. Mrs Edward F. Fulkerson, a well known San Francisco fashion model, and a Femineer herself, staged the show and the commentary was done by Mrs. Burr Randolph. Those modeling were Mesdames: Walter B. Berger, William W. Brewer, Robert D. Dalton, Edward F. Fulkerson, C. Russ Graff, George R. Maurer, Byron L. Nishkian, Earl W. Paddack, Fred Pavlow, Thomas Power, George A. Sedgwick, Bernard A. Vallerga and R. J. Woodward.

The proceeds from the show will go toward the Scholarship Fund, which each year enables an engineering student to go to the University of California School of Engineering.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The Structural Engineers Association of Southern California heard a panel discussion entitled "Construction Safety and Erection Stresses—Whose Responsibility?" at their March 2nd dinner meeting at the

(See page 34)



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PRODUCER'S COUNCIL PAGE

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Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

ANNOUNCEMENT

Producers' Council, San Francisco Chapter, announces the departure from San Francisco of Mr. Carl Frank, President of the Chapter since June of 1954. Since 1946 Mr. Frank has been a sales engineer here and since 1948 he has been a most active member of the Producers' Council. His move to Seattle, Washington, as District Manager for the States of Washington, Oregon, Idaho, Montana and parts of Wyoming and Alaska should prove most favorable for him. While we are all sorry to see him leave San Francisco, we know he will find happiness, prosperity and many new friends. Mr. John Cowley of the Brookman Company will succeed Mr. Frank in the office of President of the San Francisco Chapter.

CARL FRANK
President

Meeting Note: The next informational meeting of the Producers' Council will be held May 16th at the Athens Club in Oakland.

MARCH MEETING

The March informational meeting of the Producers' Council was held on the 7th at the Palace Hotel. The guest speaker was Mr. E. M. Linforth of Rohm & Haas Research Laboratories. His main subject was the application of Plexiglas Louvers in modern building. With the aid of slides Mr. Linforth showed different installations throughout the U. S. in schools as well as commercial buildings. The object of his talk was to show how louvers made of Plexiglas could be used for control of daylight in buildings. Rohm & Haas will try in the very near future to distribute to architects a booklet describing the different uses of Plexiglas together with data on the findings made by the Company on the best ways to utilize solar and reflected light.

The April information meeting will be replaced by the Table-Top Exhibit at the Terrace Room of the Fairmont Hotel on April 27 and until 11:00 A.M. of the 28th.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

SLUM CLEARANCE EXTENSION COURSE

A study of slum clearance and urban redevelopment as authorized by the California Community Redevelopment Law and the Federal Housing Act of 1954 is included in an evening course in "Redevelopment and the Urban Renewal" available at the University of California Extension, Los Angeles.

William H. Claire, assistant executive director of the Community Redevelopment Agency, Los Angeles, is the instructor.

The important role of private enterprise in eliminating substandard conditions and the farreaching benefits of urban renewal in solving problems of city living are stressed.

ARCHITECT SELECTED

Architect John Lyon Reid and Partners of San Francisco, has been commissioned by the San Mateo Union High School District to design new High School buildings to be erected in the city of Millbrae, San Mateo county.

COLLEGE STUDENT CENTER

Architect F. D. Harrington of San Diego is completing drawings for construction of a College Student Center on the corner of Campanile Dr., and Hardy Way, San Diego, for the Board of Education for Southern California and Arizona of the Methodist Church of Los Angeles.

The Center will contain a large patio, library, auditorium, kitchen, roofed sun room, fireplace and barbecue pit. Construction will be frame and stucco with asphalt tile and wood floors, forced air heating, and wood roof trusses.

HIGH SCHOOL BONDS VOTED

Electors of the Mt. Diablo Unified School District in Concord, California, recently approved the issuance and sale of $4,500,000 in bonds for the purpose of constructing two new High Schools, two Intermediate schools, three Elementary schools, and making additions to the present school buildings in the city.

In addition to the Bonds, application has been made to the State of California for school aid in the amount of $6,000,000, to complete the program.

ENGINEER SELECTED

The engineering firm of Headman, Ferguson & Carollo in Berkeley, has been selected by the City of Berkeley to design a self-service ramp type of garage building to be built in Berkeley.

Estimated cost of the work is $550,000.

FACTORY BUILDING

Architect Cecil S. Moyer of Oakland has completed working drawings for construction of a new factory building in Oakland, near the new bay Freeway, for the Griffin Aluminum Co.

The new building will be of 1-story, concrete block and frame construction with wood roof trusses, and will contain 10,000 sq. ft. of floor area.

Estimated cost is $50,000.

MEDICAL DENTAL

Frank Teverbaugh and Leslie C. Dawe of Walnut Creek (California) have acquired a site in nearby Castro Valley and will construct a 1-story, frame, Medical-Dental building containing 14 office suites and a drug store.

The building will contain 14,000 sq. ft. of floor area and will cost an estimated $200,000.

NEW COUNTY OFFICES

Architect Edward D. Cerruti of Oakland is completing plans for construction of new Alameda county offices buildings to be built near Hayward at an estimated cost of $800,000.

DETENTION HOME

Architects Franceschi & Mullen of Sacramento have completed plans for construction of a new Juvenile Detention Home to be built in Auburn for the Placer County Board of Supervisors.

The new Detention Home will be a part of the County Hospital and will be of pre-cast concrete panel construction. Estimated cost of the 5,000 sq. ft. building is $80,000.

APPOINTED ASSISTANT DISTRICT MANAGER

Joseph I. Gallagher has been appointed assistant district manager for Western District of the H. K. Ferguson Company (Morrison-Knudsen, subsidiary), according to a recent firm announcement.

Gallagher will maintain offices in San Francisco.

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PERSONALITIES

GEORGE WIMBERLY, A.I.A.
HOWARD COOK, A.I.A.
Architects

Honolulu, Hawaii

It would probably be an exception if a more closely allied firm of architects could be found than George Wimberly and Howard Cook of Honolulu. Graduates of rival colleges in the Northwest, the University of Washington, Seattle, and the University of Idaho, Moscow, from an athletic point of view, they seem to have formed a twin affinity for each other in the architectural world that has endowed them with an excellent versatility for performance of outstanding work in this field in the Hawaiian Islands.

GEORGE WIMBERLY
Architect

Their projects comprise office buildings, store buildings, recreational centers, automobile showrooms, banks, shopping centers, warehouses, newspaper buildings, university anl school buildings, and all manner of government projects. They have recently completed drawings for an 18-story apartment house building in Honolulu which will be known as Hawaiian Towers and contain 213 units. It will be one of the tallest apartment house buildings west of the Mississippi River and will be located on the Ala Moana at the Yacht Basin in Honolulu. They are currently preparing drawings for the Kane Ohe Shopping Center which will be near the windward portal of the new tunnel which will eliminate the circuitous but picturesque Pali Road.

HOWARD COOK
Architect

The firm was organized as a partnership in 1945 and they have executed commissions totalling approximately $23,000,000 in construction costs, having averaged over $3,300,000 per year.

The personalities of Wimberly and Cook are probably largely responsible for a great deal of their success. Amiable, friendly, alert, and receptive to new ideas, they have the faculty of making visitors to their offices feel at home whether they are clients or salesmen. They are held in the same degree of friendship and respect by their associates and employees that they are by their clients and salesmen who call on them.

To Howard and George we say "aloha nui nui."

ADRIAN WILSON AND ASSOCIATES DESIGN TURKEY DEFENSES

Multi-million dollar defense installations in Turkey are now being designed and will be constructed under the supervision of Adrian Wilson and Associates, architects of Los Angeles; Gugler, Kimball & Husted, New York, architects; and Ammann & Whitney, New York engineers.

Returning early this month from a trip to Ankara, Turkey, Wilson announced contracts completed with the Ministry of Defense for the Turkish government under provisions of the North Atlantic Treaty Organization.

"Security restrictions limit description of the project to a brief statement that the installations include facilities for both naval and air force use. They are a part of the defense perimeter established by NATO to counter any possible Communist attack," Wilson said.

The Los Angeles architect revealed that he is shifting personnel from Japan to Turkey in large part to staff the project. For the past five years his firm has been designing, engineering and supervising in excess of $100,000,000 worth of air force installation in the Far East for the Department of Defense.

"This Turkish assignment is for the initial segment of what will be an elaborate series of defense installations, and is in itself a multi-million dollar project," Wilson concluded.

UNITED DESIGNERS ASSOCIATION MEET

The second organizational meeting of the United Designer's Association, Inc., Bay Area Chapter, was held in San Francisco early this month with 70 members in attendance.

The association was founded in Pasadena, California, and is developing rapidly as its objectives include advancing the professional status of California building and graphic designers.

Officers of the Bay Area Chapter are: Robert M. Sherman, president, San Mateo; Irving Caster, vice-president, San Mateo; John M. McWilliams, secretary-treasurer, San Francisco; and directors Edward Hageman, Jr. of San Anselmo, Stanley Mattson of Mt. View, Robert Peabody of Oakland, John Baumann of San Francisco, and Clemens Friedell of San Mateo.

USES AND DEVELOPMENT OF

LACQUER - Past and Present

By A. H. THOMPSON

The word "lacquer" is derived from the Hindustani "lakh," which means "a hundred thousand." Originally given because of the myriads of insects whose waxy, resinous secretion is the basis of the shellac of commerce. Lacquering, in the generic sense of applying a protective or ornamental finish to articles of wood, metal or fibre, is not new: for centuries the art had been carried on, to a remarkable degree of virtuosity, in China, Japan, Burma, and other Asiatic countries. But, despite the fact that the beauty and durability of this finish are undeniable, the amount of time and painstaking labor required makes the use of Japanese or Chinese lacquer, a natural tree sap of remarkable characteristics, inadmissible for the mass production of Occidental countries.

Although nitrocellulose, the basic ingredient for present day lacquer was discovered early in the nineteenth century and its use as a lacquer ingredient had been disclosed by 1882, the large volume market for nitrocellulose lacquers in industrial and household finishes did not develop until about 1920. The abrupt emergence of nitrocellulose lacquers into a large-scale enterprise in the years 1922-28 can be attributed to three rather well-defined circumstances that were brought into focus during that period.

The successful production of low-viscosity nitrocellulose provided the first incentive. Early silver lacquers were of necessity very dilute solutions, because the nitrocellulose of that day was of extremely high viscosity, and only a small proportion could be dissolved if solutions of practical fluidities were to be obtained.

The second circumstance was the large supply of desirable lacquer solvents on hand at the close of World War I.

The third factor was the prospective market for lacquers in automobile finishing. The automobile industry, entering its great period of expansion, had found that line-production schedules were slowed down by the length of time that it took to finish car bodies with oleoresinous enamels. Thus, a market was ready for a fast-drying finish, low-viscosity nitrocellulose was available as the film former, and desirable solvents could be produced in quantity.

Those of you who were active in industry at that time will recall that almost everything—furniture, automobiles, industrial equipment—was coated with varnish of one type or another. You many even remember the legend of how lacquer was introduced on automobiles; how at a meeting in Detroit in 1923, the boss of one of the large car manufacturers was asked, as he went into a meeting one morning, what color he would have on his car if it were repainted, and when he came out of the meeting at noon, there was the car, all repainted just as he specified.

Thus, so the story goes, was the fundamental advantage of lacquer, its fast dry, dramatically demonstrated. Lacquer went on from there to sweep into almost every field of industrial finishing, and introduce entirely new concepts of production speed. Contrasted to the then prevalent finishing schedules that called for multiple coats of varnish, applied with intervals of a day or more to insure thorough drying of each coat, the production speeds that were possible with lacquer were truly revolutionary.

As a result, lacquer today is a major finishing material. Today more than 50 per cent of all of America's new cars are finished with lacquer. Seventy-five per cent of all wood furniture is finished with lacquer. And countless other products, from lighting fixtures to oil burners, are lacquered. Yet this great growth did not come overnight, or even with a year or two. Much

(See page 35)

WILLIAM T. WRIGHT REAPPOINTED CALIFORNIA ENGINEERING BOARD

William T. Wright, Civil and Structural Engineer and member of the architectural and engineering firm of Kistner, Wright & Wright of Los Angeles, was reappointed to the California State Board of Registration for Civil and Professional Engineers by Governor Goodwin J. Knight.

WILLIAM T. WRIGHT
Engineer

Wright was originally appointed in December 1953, to serve the unexpired term of the late Paul E. Jeffers, and under the new appointment will serve on the board for a full four year term.

Wright is the immediate past president of the Structural Engineers Association of Southern California; a director of the Structural Engineers Association of California; and a member of the Los

Angeles Building Department Board of Appeals. He is also a retired Captain in the U. S. Navy Reserve, Civil Engineers Corps.

California has approximately 26,500 registered engineers, in addition to 4,600 persons classified as engineers-in-training. The Board examines approximately 5,000 candidates for registration each year under the California law which requires six years of experience, four of which may be the result of graduation from an accredited college of engineering of which there are seven in the State of California.

WITH THE ENGINEERS

(From page 29)

Rodger Young Auditorium. Approximately 300 members and guests heard the views of the engineers, the architects, the general contractors, and the building departments, on this highly controversial subject.

Rolland J. Cravens, Chief of Mechanical Bureau, City of Los Angeles, was the Moderator. Panel members were: Oliver G. Bowen, Senior Partner, Bowen, Rule and Bowen; Milton J. Brock, Jr., Partner, M. J. Brock and Son, Inc.; William A. Jensen, Senior Structural Engineer, Los Angeles County Building Department; Harold L. Manley, Chief of Conservation Division, Los Angeles City Building Department; and Edward J. Martin, Partner, A. C. Martin and Associates.

The engineer designs, specifies and prepares plans for the completed building, and the contractor contracts for the finishing building—this is the view of Oliver G. Bowen. Mr. Bowen said that the responsibility of the construction operation is that of the contractor and, should there be a structural failure during construction, the contractor stands the expense while the failure may be reflected on the engineer.

The lives of the workmen on the jobs, the losses to owners and the engineer's reputation are the three reasons that the engineer should take an interest in the construction safety of the job during erection, according to Harold L. Manley. He also said the public expects the Building Department to take certain responsibilities of the building during the construction stage; therefore, the Building Code specifies certain construction stresses and methods that precedence has established as safe.

Mr. Martin expressed his belief that competition within the architectural and engineering fields often prevents the engineer from going to too great an expense to show construction methods and procedures on the working drawing. The engineer, when dealing with a new or unusual type of construction, must show or specify construction methods. However, on conventional types of construction, he may let the contractor provide shop drawings and use his own ingenuity.

The position of the Los Angeles County Building Department was reviewed by William A. Jensen. They consider their job to be concerned only with the finished product. Too often there are job conditions that the Building Department and the engineer cannot anticipate, such as a crane operator jerking a precast wall panel during erection, or the eccentric loading of tapered steel girders. Should a precast wall panel be overstressed to such a degree that it will endanger the final building, the panel will show a crack which is easily visible. The construction industry should assume the responsibility of familiarizing itself with new types of construction as they are being developed and used.

The general contractor acts as a broker for subcontractors for a large part of the construction job and is responsible for all phases of the work. This, Milton J. Brock, Jr., pointed out, is the reason the plans and specifications should be complete in providing details of construction. To illustrate this point, he told of a job which cost the general contractor a large sum because he could not anticipate construction difficulties.

PICTURE CREDITS: Royal Blue Print Co., Page 10 (top); Chas. R. Pearson, Page 10 (bottom), 12, 13, 14, 15; West Coast Lumbermen's Association Page 16, 17, 18, 19, 20, 21, 22, 23.

NEWS & COMMENT ON ART

(From page 6)

Rome; the San Francisco Art Association Show Number Three, featuring Paintings by Nancy Glenn and Karl Kasten, and Sculpture by Stefan A. Novak; and Thonet Furniture.

EVENTS: Classes in the enjoyment of Art for adults and children; special Sunday lectures, and a wide variety of permanent exhibitions in the fine and applied arts and historical collections.

The Museum is open daily 10 a.m. to 5 p.m.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, will present an exhibition of oils and watercolors by Louis Siegriest and Lundy Siegriest; and a group of pastels by Helen Salz, during March.

In the Little Gallery an exhibit of watercolors by Roger Stringham will be featured.

MICHIGAN STATE COLLEGE ENGINEERING SYMPOSIUM

Michigan State College, the first of the land-grant colleges in the United States, commemorates its Centennial this year. For its contribution to the Centennial program the School of Engineering is sponsoring on May 12-13, the sixth of a series of ten academic symposia as a means of focusing attention on automation, one of the most important developments in its entire field of engineering.

This Centennial Engineering Symposium theme, "Automation—Engineering for Tomorrow," is planned to be one of broad, national interest with programs built around a series of general sessions of

interest to all branches of engineerig and a concurrent series of meetings sponsored by the seven individual departments of the school.

Prof. James A. Apple of the Department of Mechanical Engineering, and Prof. John R. Snell, Head of the Department of Civil Engineering of the College at East Lansing, Michigan, are in charge of the program details.

ARCHITECT RETIRES

Architect Thomas Kent, senior partner of the San Francisco architectural firm of Kent & Hass, Architects, has retired from the firm which will be known in the future as Andrew T. Hass, Architect.

BUILDERS HARDWARE CLUB ELECTS OFFICERS

At the recent annual meeting of the Builders' Hardware Club of Northern California, the following officers were elected to serve for the ensuing year:

Robert L. Depot, The Stanley Works, San Francisco, president; Roger Graham, J. B. Rice Co., Vice-president: Charles Luthy, Schlage Lock Co., treasurer; Tom O'Neil, Russell & Erwin, secretary; and Charles Fey, National Lock Company, Sgt. at Arms.

ROBERT L. DEPOT
President

The April meeting will comprise a "flying trip to Reno, Nevada," including the trip from San Francisco by air; a buffet supper at one of Reno's famed night spots; entertainment as supplied in the State of Nevada, and "spending money." According to all advance predictions it will be one of the most unique meetings ever held by the Builders' Hardware Club.

LACQUERS

(From page 33)

skepticism existed, among both producers and users. But the slow process of trial and error eliminated the early difficulties and shortcomings, and enabled users to capitalize to the full on the many advantages of lacquer.

In early nitrocellulose lacquers, nitrocellulose itself was the principal film former; such properties as gloss, adhesion, and build were incorporated by the addition of modifying gums and resins, which were seldom added in proportions greater than about one half the weight of the nitrocellulose present. Since the nitrocellulose itself was of moderately high molecular weight, it was difficult to attain very high solids content in these lacquers at practical application viscosities. Consequently, a limitation that plagued lacquer users from the very start has been the necessity of applying a large number of coats in order to build up an appreciable film thickness. After the introduction of nitrocellulose-compatible alkyds in about 1928, it was found possible to incorporate much larger proportions of modifying resins, which resulted in considerably higher-solids-content lacquers at application viscosities.

The superiority of nitrocellulose lacquers for finishing furniture and wood products of all types has long been recognized because of their high gloss, speed of air-dry, ease of sanding and polishing, toughness, print resistance, and good resistance to changes in temperature. Higs-solids nitrocellulose wood lacquers have an added economy advantage because, with them, any desired thickness of film can be built up with fewer coats

With the development of lacquers up until about 1920 one of the first applications of lacquer to the building industry was the finishing of the interior trim and wooden doors in the Book Cadillac Hotel in Detroit.

In 1924 the Pacific Telephone & Telegraph Company had under construction their present office build-

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ing on Montgomery St. in San Francisco and after extensive research and experimentation, lacquer was decided on as the ideal finish for the interior metal trim and all wood doors and wood paneling. The writer of this article was instrumental in the successful conclusion of this early day adaptation of lacquer to the largest building structure to be so finished. Knowledge gained in using lacquers for both metal and wood finishing in industry lent itself perfectly in the Pacific Telephone & Telegraph Co. Building, as the metal trim was finished in the same maner as an automobile, using lacquer metal primer and finish lacquer coats which were rubbed and polished.

In later years the Redwood Room at the Clift Hotel was constructed, as was the El Prado at the Plaza Hotel. Wood paneling was used on the walls in both rooms and lacquer was chosen as the Superior Wood Finish.

One of the finest adaptions of lacquer to a present day structure, 1951 to be exact, was the use of lacquer as the Superior Wood Finish in the finish of the wooden doors and wood paneling in the California State Capital Annex at Sacramento.

Time has proven that the choice of lacquer was justified in the above early day users of lacquers as well as the present and with the present day trend toward wood paneling and natural wood finishes, lacquer is destined to be the favored product in the large future development of the building industry.

INSTITUTE ON OPERATIONS RESEARCH FOR BUSINESS

Plans for an Institute on Operations Research for Business and Industry to be held April 28-29 on the Los Angeles campus of the University of California, have been completed by the University's division of Engineering Extension.

Defining "operations research" as the application of scientific methods to the solution of management problems, L. M. K. Boelter, Dean of the Engineering School points out that the conference is designed for executives of business and industry and will be valuable to all line and staff personnel involved in management decisions. Technical presentations will be minimized in order to emphasize the actual applications and their value to management and the company.

AMERICAN SOCIETY FOR METALS PUGET SOUND SECTION

John F. Baisch, Metallurgist with the Boeing Airplane Company in Seattle, presented an informative address before members of the ASM on the subject of "Titanium Fabrication and Application."

As an introduction to his subject Baisch discussed recent improvements in titanium melting techniques and the resulting effect on material uniformity. He cited establishment of a Titanium Metallurgical Laboratory at Battelle by the Defense Department Steering Group on Titanium Research and Development. In addition to other functions this laboratory will collect and disseminate available information on the current status of titanium research and development and provide technical consulting services to producers and fabricators of titanium metals.

ENGINEERING OFFICES OPENED

Nathan Karp, engineer, has opened offices at 918 Harrison Street in San Francisco 7.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THE BOMB, SURVIVAL AND YOU—Protection for People, Buildings, Equipment. By Fred N. Severud & Anthony F. Merrill. Reinhold Publishing Corpn., 430 Park Avenue, New York 22. Price $5.95.

Existing structures can be strengthened to withstand atomic blast; people, at home and at work, can find safety; equipment serving the functions of a building can be protected; new buildings can be designed to withstand the effects of atomic blast—these and many other subjects are clarified by the authors of this book.

Known materials and known methods are applied to the new problem of instantaneous overloads, of tremendous but brief force. Dynamic design as opposed to the old method of building structures for static loads, is emphasized.

Many suggestions and technical advice is contained in the 31 line drawings and the 16 pages of photographs. Architects, engineers, town planners, and the public in general will be interested in reading this book.

BUILDING CHECK LIST. By Ben John Small. Reinhold Publishing Corpn., 430 Park Avenue, New York 22. Price $3.50.

A Progressive Architecture Book by the author of "Streamlined Specifications Standards" and "Architectural Practice" (in collaboration with Clinton H. Cowgill). This book is a complete "check list" of all phases of construction, with chapters devoted to Specifications, Equipment, Contracts, Tips to Job Captains, Resume of A.I.A. General Conditions, and Associations and Institutes. A valuable addition to any library.

INDUSTRIAL SITE SELECTION. By Gerald Breese. The Bureau of Urban Research, Princeton University, Princeton, N. J. Price $2.00.

This is a case study of existing and potential industrial locations in Burlington County, New Jersey; contains many maps and suggestions applicable to other similar areas.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Joist hangers. A new booklet entitled "Building Specialties", (A.I.A. File No. 14-J), gives information on joist hangars; allowable load values for joist hangers; ideally adapted to modern framing of roofs and ceilings. Includes descriptions, allowable load values and prices for joist anchors, tie straps, split ring timber connectors, post bases, plate washers, and clip angles. Fee copy write DEPT-A&E, Arch Rib Truss Corpn, P. O. Box 6742, Los Angeles 22, Calif.

Specifications for metal lathing and furring. New booklet covers all types of metal lath construction, includes specifications for solid and hollow partitions, wall furring, metal lath attached directly to wood supports, contact ceilings, furred ceilings, suspended ceilings, beam and column protection for fireproofing, and reinforcing for exterior stucco. Copies available: write DEPT-A&E, Metal Lath Manufacturers Association, Engineers Building, Cleveland, Ohio.

Water coolers. A 30-page bulletin of Federal specifications on water coolers is available to architects, engineers, contractors, and all persons in similar specifying capacities: comprehensive in detail, includes all necessary charts and tables for various type coolers. Write DEPT-A&E, Sunroc Refrigeration Company, Glen Riddle, Pa.

Air filtering. New pamphlets now available on air filters, designed for high efficiency in commercial and industrial ventilating air conditioning systems; also for office, institutional and other commercial buildings and industrial plants. Copy available write DEPT.-A&E, Cambridge Filter Corpn, 738 Erie Blvd. East, Syracuse, N. Y.

Swimming pool filters. A new booklet on swimming pool filters for crystal clear water; includes numerous photographs of equipment and installations both indoor and out: also colored

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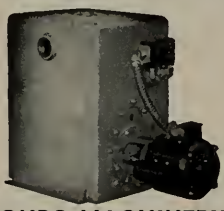

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charts showing simple operating procedures for complete filtration cycle, and dimensional charts on flow and pool turnover. For complete information write DEPT-A&E, R. P. Adams Co., Inc., Buffalo 17, N.Y.

Foundation pipe. Booklet entitled "Taylor Forge Foundation Pipe" just published describes characteristics of forge foundation pipe for piling and illustrates its application in the construction of bridges and buildings; photographs show actual pile driving operations; also reproduces pile driving logs; gives sizes of pipe commonly used and driving ends preparations. Bulletin 542 available by writing DEPT-A&E, Taylor Forge & Pipe Works, P.O. Box 485, Chicago, Ill.

Lightweight construction handbook. Practical handbook of lightweight construction methods outlines uses, installation procedures, and specifications of vermiculite products in lightweight construction; reviews basic aggregate requirements for lightweight construction, and compares them with vermiculite aggregate properties; also includes fire tests and ratings for various structures. Copies available: write DEPT-A&E, Zonolite Co., 135 LaSalle St., Chicago 3, Ill.

Spiral steel stairs. A new catalog on Spiral Steel Stairs is now available from Michel & Pfeffer Iron Works; it shows construction details and gives complete specification for the architect's use and features photographs of recent installations. Spiral Stairs are suitable for installation in new or existing buildings for industrial, institution or residential use, either interior or exterior, and are especially recommended where floor space is limited as they occupy about one-fourth the floor area of a conventional stair. Catalog may be obtained by writing MICHEL & PFEFFER IRON WORKS, INC., 212 Shaw Road, South San Francisco.

Sewage ejector tables. A new booklet just released gives engineering tables simplifying the selection of clog-proof "flush kleen" sewage ejectors. Examples are given for determining the inflow, discharge heads and types of sewage ejectors to use in any of the following applications: underground municipal lift stations, industrial applications, building installations such as hotels, apartment buildings, bus terminals, and railroad stations. Free copy available by writing DEPT-A&E, Chicago Pump Co, 622 Diversey Pkwy, Chicago 14, Ill.

Automatic controls. A new 32-page catalog describing complete line of automatic controls for heating, refrigeration, and air conditioning has just been released; contains full information regarding room thermostats, space thermostats, relays, pressure and hydraulic-action temperature controls; includes controls for oil and gas fired systems of both warm air and hot water heating; controls for special applications are also shown. Free. Write DEPT-A&E, White-Rodgers Electric Co, St. Louis 6, Mo.

Insulating piping systems. New 90-page catalog on insulated piping systems; lists illustrations and specifications for underground or overhead use: 5 separate sections include 1) product, 2) engineering, 3) specifications, 4) drawings, and 5) installation. Each individual section has a tabbed, lead page of contents for quick, easy reference; all engineering and specifications have been brought up-to-date, effective February 1, 1955. Copies available. Write DEPT-A&E, Ric-wil, Inc., Barberton, Ohio.

"Alloy Steels Pay Off." A new 200-page handbook highlights economic advantages of fabricating with alloy steels for improved weight-to-strength ratios in aircraft construction, bridges, electrical equipment, machinery, trucks and busses. Advantages of high impact strength and shock-load resistance are discussed, as well as savings resulting from improved resistance to corrosion and wear. Available to engineers, purchasing and management personnel. Write Climax Molybdenum Co, 500 5th Ave, New York 36.

Electrified reinforced concrete joist floors. A new 16-page booklet gives complete details on R/C Duct Floors, a new development which provides 100% electrical flexibility for buildings at low cost (A.I.A. File No. 31-C-62); large pictures and diagrams in two colors aid in the explanation of structural details, design considerations, and cost comparisons; a two-page study of the fire rating tests; complete technical specifications included for the convenience of architects and structural engineers. Free copies. Write DEPT-A&E, Concrete Reinforcing Steel Institute, 38 So. Dearborn St, Chicago 3, Ill.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Freme Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Freme Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00. Cartage—Approx. $10.00 per M. Paving—$75.00.

Building Tile—	
8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00
Hollow Tile—	
12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45
Cement—		

Common (all brands, paper sacks). Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Meduse White, Calaveras White — { 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.62

Aggregates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnasite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390.00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grede	375.00
33/32 x 2¼ 3rd Grede	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grede	400.00
33/32 x 2¼ 2nd Grede	360.00
33/32 x 2¼ 3rd Grede	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
7/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
7/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
7/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
7/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

545 No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Raw	Wholesale Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$ .....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile
Scored ..... F.O.B. S. F.
12 x 12, each ..... $ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00
Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2B93
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS 8. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., RU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(96)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

WAREHOUSE. Oakland, Alameda county. Oakland Warehouse Co., owner. 1-story, reinforced concrete tilt-up walls, timber roof and composition roofing, concrete floors constructed at truck height; 150,000 sq. ft. floor area — $400,000. ARCHITECT: Cecil S. Moyer, Oakland. GENERAL CONTRACTOR: A. S. Holmes & Son, Oakland.

SHOP BLDG. & OFFICE. Torrance. owner c/o Engineer. 1-story concrete tilt-up construction, wood trusses or tapered steel girders, composition roofing, concrete slab, steel sash, electrical, plumbing, mechanical ventilation, brick planters, slab floor, plate glass, rock and oil paving, 5-ton movable crane, laminated plastic counter top; 80x130 ft. ENGINEER: F. O. Reyenga, Los Angeles. GENERAL CONTRACTOR: Willard R. Duncan.

AUTO SALES & SERVICE. Reno, Nevada. Richards & Lovelock, Inc., Reno, owner. 2-story structural steel and reinforced concrete construction; roof parking — $175,000. ARCHITECT: Russell Mills, Reno. GENERAL CONTRACTOR: W. H. Wine Constn Co., Reno.

CHURCH. Las Vegas, Nevada. Griffith Methodist Church, Las Vegas, owner. Frame and masonry construction, copper and composition roofing, cement, hardwood and asphalt tile floors, air conditioning, insulation, steel sash, ceramic tile plaster, sheet metal, heating and ventilating—$150,000. ARCHITECT: John Replogle, Las Vegas. GENERAL CONTRACTOR: J. A. Tiberti, Las Vegas.

MEDICAL BLDG. San Rafael. Dr. Albert, c/o Architect, owner. Frame and stucco construction; 3600 sq. ft. in floor area—$59,800. ARCHITECT: Bruce E. Heiser, San Francisco. GENERAL CONTRACTOR: John A. Nelson, San Francisco.

VETERINARY SCIENCE BLDG., University of California campus at Davis, Yolo county. Board of Regents, University of California, owners. 1-story, precast concrete panels, framing, heating and cooling systems; 50x200 ft. in area—$48,568. ARCHITECT: Franceschi & Mullen, Sacramento. GENERAL CONTRACTOR: Lawrence Constn Co., Sacramento.

LIBRARY, High School, Roseville, Placer county. Roseville Union High School, Roseville, owner. Light steel frame and frame and stucco construction; 9000 sq. ft. floor area—$128,988. ARCHITECT: Gor-

don Stafford, Sacramento. GENERAL CONTRACTOR: Don Da Roza, Dutch Flat, California.

PAROCHIAL SCHOOL, Sacramento. Roman Catholic Diocese of Sacramento, owner. Frame and stucco construction; 8 classrooms, administration room, toilet rooms — $123,856. ARCHITECT: Clarence C. Cuff, Sacramento. GENERAL CONTRACTOR: George J. Harlan, Sacramento.

STANFORD SHOPPING CENTER, Palo Alto, Santa Clara county. Stanford University, Palo Alto, owner. One story reinforced concrete shell; 79,000 sq. ft. of floor area; 2 restaurant buildings, reinforced concrete construction; 50x150 ft. each—$560,000. ARCHITECT: Welton Becket & Associates, San Francisco. GENERAL CONTRACTOR: Wagner & Martinez, San Francisco.

OFFICE BLDG., West Los Angeles. Gemological Institute of America, Los Angeles, owner. Two story building, frame and stucco construction; composition roofing, slab, asphalt tile and ceramic tile, wood paneling, exposed rafters, central heating and ventilating, toilets, laboratory and dark room, metal stairs, steel sash, paving—$120,000. ARCHITECT: Richard Neutra, Los Angeles. GENERAL CONTRACTOR: Pallisgaard-Wilson, Los Angeles.

CHURCH, North Hollywood, Los Angeles county. Assembly of God Church, North Hollywood, owner. Two story frame and stucco construction; composition shingle roofing, concrete slab, asphalt tile floors, steel beams, wood rafters, wood sash, interior plaster, fire sprinklers in basement area, wall heaters with thermostat control, toilet rooms, kitchen; 84x93 ft. in area—$60,000. ARCHITECT: J. A. Murrey, North Hollywood. GENERAL CONTRACTOR: Warren G. Bradley Constn Co., North Hollywood.

OFFICE AND FACTORY, Santa Monica, Los Angeles county. Hydro-Mill Co., Los Angeles, owner. Two story concrete tilt-up type construction; composition roofing, diagonal wood sheathing, concrete slab, steel sash, overhead doors, heating and ventilating, toilets, asphaltic paving; 48,000 sq. ft. of area. STRUCTURAL ENGINEER: Wm. M. Taggart, and Craig B. Kelford, associate. GENERAL CONTRACTOR: George W. Carter Co., Los Angeles.

SHOWER & LOCKER BLDG., High School, Reedley, Fresno county. Reedley Joint Union High School District, Reedley, owner. Cost $146,270. ARCHITECT: William Hastrup, Fresno. GENERAL CONTRACTOR: Ellberg & Conklin, Kingsburg.

BUS DEPOT, Fairfield, Solano county. Leo McInnis, owner. One story concrete block and frame construction, paving; 50x90 ft.—$42,500. STRUCTURAL ENGI-

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3. 5	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.75		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	43.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.69	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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NEER: Edward P. Schwafel, Vallejo. GENERAL CONTRACTOR: Pacific Co., Berkeley.

LIBRARY, High School, Redding, Shasta county. Shasta Union High School District, Redding, owner. Frame and stucco construction — $60,000. ARCHITECT: Charles F. Dean, Sacramento. GENERAL CONTRACTOR: Karl E. Hattenhauer, Red Bluff.

WORLD TRADE CENTER, Ferry Building, San Francisco. State of California, Board of Harbor Commissioners, owner. Interior remodel of existing 2-story north wing of Ferry Building into 3-story building; reinforced concrete, structural steel, aluminum sash, marble work, elevators, sprinkling fire system, mosaic tile, terrazzo quarry tile floors, tile and linoleum floors, and demolition of present building and ferry slip — $1,709,916. ARCHITECT: Wm. G. Merchant, San Francisco. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

COUNTY HOSPITAL, Ukiah, Mendocino county. County of Mendocino, Ukiah, owner. One story frame and stucco construction: facilities for 82 beds—$841,125. ARCHITECT: Stone, Mulloy and S. P. Marraccini, San Francisco. GENERAL CONTRACTOR: Utah Construction Company, San Francisco.

TERMINAL, Los Angeles. Union Oil Company, Los Angeles, owner. Terminal facilities on 14-acre site; concrete office building, 20,000 sq. ft. floor space; blending and packaging building with 125,000 sq. ft. area; 72 tanks and structural steel work; composition roofing, slab floors,

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metal sash, metal fire doors, asphalt tile, acoustical, toilets, electrical work, plastering, paving, fencing — $3,000,000. GENERAL CONTRACTOR: Bechtel Corpn, Los Angeles.

MORTUARY, Richmond, Contra Costa county. Richmond Funeral Home, Richmond, owner. One story concrete block and frame construction, steel sash, composition roofing, asphalt tile floors and carpets—$28,980. ARCHITECT: Charles F. Strothoff, San Francisco. GENERAL CONTRACTOR: Carl Lundberg, Richmond.

PRIMARY SCHOOL, Sutter Creek, Amador county. Oro Madre Unified School District, Sutter Creek, owner. Frame and stucco construction; 4 classrooms, kindergarten, multi-purpose combination room, kitchen, toilets—$145,000. ARCHITECT: Koblik & Fisher, Sacramento. GENERAL CONTRACTOR: J. Harold Pendry, Placerville.

WASHINGTON TOWNSHIP HOSPITAL, Alameda county. Washington Township Hospital District, Niles, owner. Two story, with basement, type 1; reinforced concrete construction; provision to add additional floors at later date; aluminum sash, elevators, rubber linoleum tile, ceramic tile floors—$1,500,000. ARCHITECT: Sorenson & Ellsworth (architect), Niles. GENERAL CONTRACTOR: John E. Branagh & Son, Piedmont.

CATHOLIC HIGH SCHOOL, Tucson, Arizona. Salpointe High School, brick and steel construction, tile roofing, slab and concrete asphalt tile floors, metal sash, heating and ventilating systems—$500,000. ARCHITECT: Place & Place, Tucson. GENERAL CONTRACTOR: Sundt Constn Co., Tucson.

ELEMENTARY SCHOOL, Montague, Siskiyou county. Montague Elementary School District, Montague, owner. Frame and brick veneer construction; 13,700 sq. ft. in area — $224,700. ARCHITECT: Howard R. Perrin, Klamath Falls, Oregon. GENERAL CONTRACTOR: A. G. Silva Constn Co., Klamath Falls, Oregon.

APARTMENT, San Francisco. Mr. Capurro, owner. Three story, with basement, frame and stucco construction; remodel adjacent basement into apartments—$147,000. ARCHITECT: Leonard M. Tivel, San Francisco. GENERAL CONTRACTOR: De Martini Bros., San Francisco.

HIGHWAY DEPT. BLDG., Santa Fe, New Mexico. State of New Mexico, Santa Fe, owner. Complete facilities for conduct of highway department business—$1,093,000. ARCHITECT: W. C. Krueger & Associates, Santa Fe, New Mexico. GENERAL CONTRACTOR: C. H. Leavitt & Co., El Paso, Texas.

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LIBRARY, High School, Downey, Los Angeles county. Downey Union High School District, Downey, owner. Rigid steel frame, reinforced brick walls four feet high with stucco above, steel decking, hot water heating system, metal sash, aluminum louvers, concrete slab and asphalt tile floors, acoustical tile, plumbing, electrical, grading work; 3000 sq. ft. of floor space—$48,850. ARCHITECT: Clifford K. Denman and Harry T. MacDonald, Associated Architects. GENERAL CONTRACTORS: Carter Mack Builders, Harbor City.

BANK, Kerman, Fresno county. Bank of America, San Francisco, owner. One story concrete block and frame construction; mezzanine; 37x140 ft. in area—$104,990. ARCHITECT: Capital Company, San Francisco. GENERAL CONTRACTOR: R. T. Dealy, Avanel.

BOWLING ALLEY AND LOUNGE, Bronson Avenue, Los Angeles. 16 alleys and cocktail lounge; concrete block construction, clear span tapered steel girders, steel columns, concrete footings and foundations, terrazzo floors, acoustic ceilings, composition flooring, plumbing, heating, evaporative cooling, ceramic tile, electrical, neon sign. ARCHITECT: William Shinderman, Beverly Hills. GENERAL CONTRACTOR: Lacey F. Johnson, Los Angeles.

CHURCH, Alameda. First Baptist Church, Alameda, owner. Reinforced concrete and frame construction — $100,000. ARCHITECT: Donald Powers Smith, San Francisco. GENERAL CONTRACTOR: Phil A. Bethel, Oakland.

SUPERMARKET, San Diego. Cabrillo Terrace Supermarkets, San Diego, owner. The 10,000 sq. ft. building will be of masonry construction, cap sheet roofing, slab floor, forced air heating, air conditioning, asphalt paving, plastering, plate glass. ARCHITECT: Paderewski, Mitchell and Dean, San Diego. GENERAL CONTRACTOR: Shepherd, Mumby & Clancy, San Diego.

OUTPATIENT BLDG., Highland Hospital, Oakland, Alameda county. County of Alameda, Oakland, owner. Five story, reinforced concrete construction, asphalt tile, linoleum, terrazzo, floors, metal windows—$1,770,600. ARCHITECT: Corlett & Anderson, Oakland. GENERAL CONTRACTOR: John E. Branagh & Son, Piedmont.

SHOPPING CENTER, Sacramento. Geo. Quan, Broderick, owner. One story, reinforced concrete tilt-up construction; 25,000 sq. ft. of floor space in shopping center and supermarket—$175,000. ARCHITECT: Earl John Taylor, Sacramento. GENERAL CONTRACTOR: Campbell Constn Co., Sacramento.

SUNDAY SCHOOL & PARISH HALL, Anaheim, Orange county. Zion Lutheran Church, Anaheim, owner. Two story frame and stucco Sunday School building and Parish Hall; 70x123 ft. in area, composition shingle and asbestos shingle roofing, laminated beams, steel sash, concrete slab and hardwood floors, asphalt tile flooring, heating and air conditioning, kitchen, toilet

rooms; also 2-room frame and stucco addition to the Zion Lutheran School in Anaheim, gravel roofing, cement slab floors, steel sash. ARCHITECT: O. J. Bruer, Montebello. GENERAL CONTRACTOR: Leonard Vic Bouas, Anaheim.

RESTAURANT & STORE. San Francisco. Milton F. Kreis, Los Angeles, owner. Exterior and interior remodel of building at Geary & Powell Streets — $132,581. ARCHITECT: P. R. Williams, Los Angeles. RESIDENT ARCHITECT: Leonard S. Mosias, San Francisco. GENERAL CONTRACTOR: Elvin C. Stendell, San Francisco.

HIGH SCHOOL ADD'N, Hawthorne, Nevada. Mineral County High School District, Hawthorne, owner. Addition to consist of classrooms, home making and commercial departments—$135,600. ARCHITECT: Russell Mills, Reno. GENERAL CONTRACTOR: Silver State Constn Co., Fallon, Nevada.

IN THE NEWS

ARCHITECT SELECTED

Architect Donald Francis Haines of San Jose, has been commissioned by the City of San Jose to draw plans for construction of a new City Hall to be built in the City of San Jose.

Estimated cost of the project is $2,500,000.

WAREHOUSE TO SKATING RINK

Consulting Engineer H. L. Standefer of Studio City, Los Angeles county, is completing plans for conversion of a warehouse building in Reseda into a modern skating rink. The existing building is 100x150 ft., and the work involves frame and stucco partitions, move brick exterior walls, reinforced trusses, rod bracing, new fire sprinklers, new flooring, installation of toilets and related work.

COMMUNITY HOSPITAL

The architectural firm of Russel G. De Lappe and Mitchell Van Bourg, Berkeley, are completing working drawings for construction of a 32-bed Community Hospital in the City of Sonoma for the Sonoma Valley Hospital District.

The new building will be of 1-story, reinforced concrete and frame construction and will cost an estimated $300,000.

HIGH SCHOOL GYMNASIUM

Architect Robert Stanton of Carmel is completing drawings for construction of a gymnasium building for the High School at Gonzales.

The new building will be of frame and stucco construction and will cost an estimated $225,000.

MEDICAL BUILDING

Otto W. Hansen of Downey has completed drawings for construction of a 1-story frame, stucco and wood siding medical building in Bell for Dr. Vernon D. Remelin.

The building will contain 1380 sq. ft. of floor space, rock roofing, aluminum sash, concrete slab and asphalt tile covered floors, forced air heating, acoustical tile ceilings, toilet rooms, stall showers, and cabinet work.

COMMUNITY HOSPITAL

Architects Stone, Mulloy & S. P. Marraccini of San Francisco, are completing drawings for construction of a Community Hospital building in the City of Petaluma for the Petaluma Hospital District.

The Hospital will be 1-story in height, frame and stucco construction and will contain some 25,000 sq. ft. of area. Facilities will be provided for 50-beds.

NEW CHURCH FOR LODI

Architect Chas. F. Dean of Sacramento is completing drawings for construction of a new Church in Lodi for the Temple Baptist Church of Lodi.

Of concrete block and frame construction the Church will cost $125,000.

HOSPITAL PROJECT

Architects Nielsen & Moffatt of Los Angeles are preparing drawings for construction of a 43-bed hospital to be built on a four acre site in West Covina for the Lark Ellen Hospital, Inc.

Construction will be frame, stucco and brick, composition roofing, slab and terrazzo floors, ceramic tile, air conditioning, metal sash, asphalt concrete paving.

NEW BANK STOCKTON

Architects Mayo, Johnson & De Wolf of Stockton; Structural Engineer Arthur A. Sauer of Sacramento; Mechanical Engineer Daniel Vandament of San Francisco; and Electrical Engineers Williamson & Volmer of Oakland are collaborating in designing a new 2-story, with basement, bank building in the City of Stockton for the Anglo California National Bank of San Francisco.

The new structure will be of structural steel, frame and reinforced concrete construction; 70x100 ft. in area it will cost an estimated $400,000.

ARCHITECT TO JUDGE

Architect William Glenn Blach, president of the Southern California Chapter, American Institute of Architects, will serve as a judge for a Southern California and Arizona student design competition which

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Others serving as judges include: Robert Hanley, president, A.I.D.; Ross Bellah, art director of Columbia Pictures Corpn.; Dan Aberle and Edna Green, A.I.D. board members.

NEW PAROCHIAL HIGH SCHOOL

The Roman Catholic Diocese of Sacramento announces architect Harry J. Devine of Sacramento is completing plans for construction of a new High School building to be built in Sacramento.

The new facilities will provide for 1,000 students and will cost an estimated $1,450,000.

JUNIOR HIGH SCHOOL NEARING COMPLETION

The new $1,921,300 Vanowen-Coldwater Canyon area Junior High School for the Los Angeles City School District is nearing completion and will be ready for occupancy in late summer.

The new facilities, designed by Risley & Gould, Los Angeles architects, comprise 23 buildings and complete educational facilities for 1,600 students.

ARCHITECT SELECTED

Architect Paul James Huston of Palo Alto has been commissioned by the Palo Alto Unified School District to design a new Central Administration Building to be built on Churchill avenue in Palo Alto.

SCHOOL BONDS ARE APPROVED

Electors of the Sacramento Unified School District, Sacramento, recently approved the issuance and sale of $13,500,000 in school bonds with funds to be used in increasing facilities of the Sacramento public schools.

Harry J. Devine, Sacramento architect is consultant for the Board.

SCHOOL BONDS APPROVED

Voters of the Magnolia School District of Orange county recently approved a proposal to issue and sell school bonds in the amount of $250,000, and to accept a loan of $1,500,000 from the State of California, to finance needed school construction in the district.

NEW FLOWER MARKET

Architect Mario J. Ciampi of San Francisco is completing preliminary studies on the construction of a new Flower Market for the San Francisco Flower Growers Association to be built on a proposed site on Brannan street between 5th and 6th streets.

The present site of the Flower Market on 5th and Howard has been sold and will be converted into an automobile parking area.

NATURAL DAYLIGHT

A new product has been introduced to the building industry which provides daylighting from above, plus access to the roof.

This new unit, called the Wascolite Hatchway, admits natural daylight through an acrylic plastic dome. The dome is raisable to permit safe, easy access to the roof.

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JOSEPH MESQUITE IS HONORED BY KRAFTILE

The Kraftile Company of Niles, California, began the observance of its 30th year in business the first of this year by honoring Joseph Mesquite, a dry-pan operator, who was the first worker the Company hired.

A "Joe Mesquite Day" was observed throughout the plant with Mesquite and his daughter, Mrs. Marie Dooley, the guests of honor at a special luncheon at-

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tended by members of the Company's "Twenty-Year Club," and by foremen and executives.

L. R. Alt. vice-president, presented a $300 Savings Bond to Mesquite. Another feature of the luncheon program was the presentation of a pictorial history of the Kraftile Company arranged by Tom Robbins, shipping department foreman.

C. W. Kraft, president, served as master of ceremonies.

CITY HALL REMODEL

The City of San Pablo, Contra Costa county, will spend $100,000 in remodeling the old Market School into a new City Hall, with funds for the work being made available by a recent special bond election.

The architectural firm of Barbachano, Ivanitsky & Watanabe of El Cerrito, are completing drawings for the modernization project.

HIGH SCHOOL GYMNASIUM

Architects C. B. Alford and W. J. Thomas of Bakersfield are completing plans for construction of an addition to the Wasco High School consisting of a gymnasium building.

FHA LOS ANGELES OFFICES MOVED

Capt. Norman M. Lyon, director of the Los Angeles Issuing Office of the Federal Housing Administration, announces the FHA is now located in new offices in the Petroleum Building, Olympic Blvd. and Flower St., Los Angeles.

The underwriting and administrative divisions are located on the second floor, while the property management, Title I, market analysis and racial relations are on the third floor.

ARCHITECTURAL FIRM ADDS PARTNER

Al Boeke has become a partner in the architectural firm of Hutchinson, Kinsey & Boeke, according to an announcement by Kersey Kinsey.

Boeke was formerly an associate in charge of production for the architectural firm of Neutra & Alexander.

The firm of Hutchinson, Kinsey & Boeke is located in Studio City, Southern California.

SUBDIVISION APPROVED

The Fullerton City Council has approved a 204-home subdivision to be developed east of Cypress Avenue in Fullerton.

MANUFACTURING BUILDING

Engineers Robert O'Hanlon and C. F. Ewald of Burbank, are completing plans for contsruction of an addition to the Globe Aviation Company plant in North Hollywood.

The addition will have composition roofing, concrete slab floors, tapered steel girders and will contain 5600 sq. ft. of floor area.

SCHOOL BONDS APPROVED

Voters of the Baldwin Park School District recently approved the issuance and sale of $900,000 in school bonds for the construction of new classrooms to the city's schools. A State loan of $1,800,000 will also be used in the construction program.

ARCHITECT SELECTED

The architectural firm of Buchter & Lillis of Vallejo has been commissioned by the Vallejo Unified School District to design a cover to be erected over the District's swimming pool in the City of Vallejo.

It is estimated the work will cost $50,000.

RESTAURANT FOR ANAHEIM

The architectural firm of Armet & Davis of Los Angeles is completing plans for construction of a restaurant in Anaheim for the Clock Restaurants.

The new unit will contain 5000 sq. ft. of floor space and will be of stone and steel construction; composition roofing,

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concrete floor, asphalt tile covering, painting, plastering, plumbing, electrical work, and air conditioning.

Estimated cost of the work is $250,000.

ARCHITECT SELECTED

The architectural firm of Barovetto & Thomas of Sacramento, has been commissioned by the University of California, Board of Regents, to design a Soils and Plant Nutrition building to be erected on the University of California campus at Davis.

ELDON E. FOX PROMOTED

Eldon E. Fox has been appointed to the newly created position of director of advertising and sales promotion for the Minneapolis-Honeywell Regulator Company, according to an announcement by H. D. Bissell, director of merchandising for the firm.

Fox previously served as advertising manager, and prior to that was engaged in advertising agency work in New York City. He is also chairman of the advertising committee of the Producers Council, Inc.

SAFEWAY MARKET BUILDING

Architect Wurster, Bernardi & Emmons of San Francisco have completed working drawings for construction of a new market building in Richmond for the Bramwell Construction Company to be used as a new Safeway Market.

The new market building will be of 1-story construction; concrete block, structural steel roof trusses with wood roof; 100x170 feet in size.

RESIDENTIAL DEVELOPMENT

Architect Elmo C. Bruner of Las Vegas, Nevada, is completing plans for construction of four-hundred and fifty new dwellings to be built in Las Vegas for L. S. Whaley of Long Beach, California.

ARCHITECT SELECTED

The architectural firm of Kent & Hass of San Francisco, has been commissioned by the Alameda Unified School District in Alameda, to draft plans for construction of an addition to the Frank Otis Elementary School, and addition to the Edison Elementary School, a group of portable classrooms for the Webster, John Muir and Burbank schools, all in the City of Alameda.

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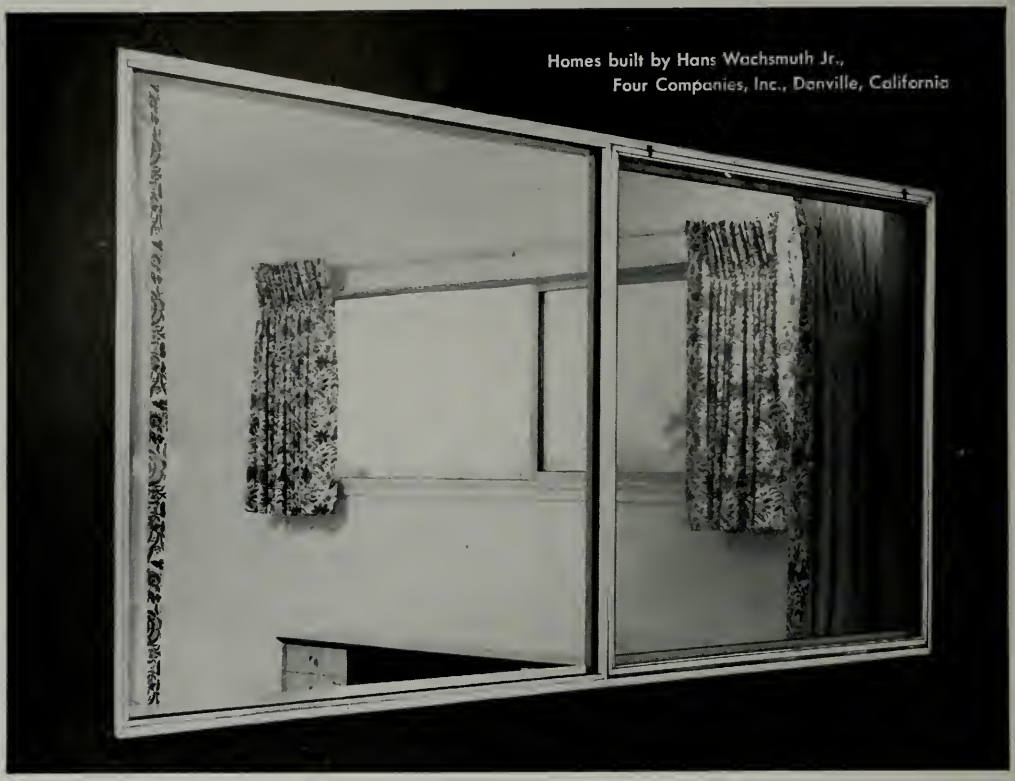
ARCHITECT AND ENGINEER

DOWNTOWN CENTER GARAGE . . . San Francisco

W. H. ELLISON, Structural Engineer

APRIL 1955



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★

COVER PICTURE

DOWNTOWN CENTER
Self-Parking

GARAGE
San Francisco

W. H. Ellison,
Structural Engineer

George A. Applegerth,
Architect

J. Marion Thomas,
Mechanical Engineer

Newest addition to a solution of San Francisco's downtown auto parking problem is this modern self-parking earthquake-proof, garage.
For complete story see page 8.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

ENGINEER TRAINING

American industry is rapidly becoming a post-graduate school for engineer training.

The increasing complexity of industrial processes has put industry into the higher educational business on a major scale as the gap widens between college trained engineers and production realities.

A nation-wide survey report just compiled by the Professional Engineers Conference Board for Industry, discloses that engineer training ranges all the way from a program in a ten-man consulting office where two engineers a year are given training assignments, to the program of a vast corporation operating a full-fledged college, empowered by the state to award degrees up to the doctorate.

The survey shows that a few "holdouts" have resisted the industry training programs, but the trend is overwhelmingly in the direction indicated by the executive who summed up the situation as follows:

"The days when we could afford to toss a new man out in the shop and let him fend for himself are gone. We just can't afford it nowadays. It just isn't good economics today to fail to bring your new men to the highest possible point of efficiency in the shortest possible time."

The objective of the survey, according to John D. Coleman, Conference Board chairman, "is to learn what is being done now in the field of engineer training, and we want to use this information to develop concrete suggestions that will be of value to management and professional engineers in all the technical branches."

The engineering professions and American industry will both remain strong as long as such constructive thinking and effort is continued.

* * *

Small, efficient oil-fired boilers offer the homeowner a choice of heating the home with equipment in any convenient location.

* * *

PRIVATE INDUSTRY FUNCTIONING

Private enterprise is demonstrating on the Ohio River that it can perform the enormous task of providing facilities and electric power to meet unprecedented needs for the government's atomic energy program.

Two huge generating plants, being built under a contract signed in 1952 with the Atomic Energy Commission, are rapidly taking from. One is near Gallipolis, Ohio, called the Kyger Creek plant, and the other near Madison, Indiana, named the Clifty Creek plant.

A joint enterprise of fifteen Ohio River basin utility companies called the Valley Electric Corporation, is erecting the two plants, and a few days ago the first two generating units were placed "on the line," the accomplishment occuring only twenty-seven months after the first earth was turned at the two sites. The progress of the project designed to meet the monstrous electrical needs of the new-billion-dollar atomic installations in Ohio, has astounded government planners.

When completed the two plants will deliver fifteen-billion kilowatt hours a year, and costing in excess of $440-millions, they are being built without one cent of the taxpayers' money.

Private enterprise can deliver, when given the opportunity.

* * *

The right to work is as basic to a free America as the right to "Life, Liberty and the Pursuit of Happiness."

* * *

NATIONAL HOME WEEK

The big nation-wide home ownership observance event sponsored each year by the National Association of Home Builders, will take place September 10-18, giving an extra week-end for the public to visit more than ten thousand homes which will be created throughout the United States by members of the Association in more than one-hundred and fifty cities.

According to plans, in many areas the observance will take the form of a "Parade of Homes" in which from twenty to forty display homes are built side by side. In other areas the exhibit homes will be scattered through the city.

Whether you are interested in buying or building a new home or not, you should avail yourself of the Home Week opportunity to visit the displays in your community, and see the tremendous progress being made in architectural design and construction material and equipment products that contribute to day's easy to obtain American Home.

* * *

Money spent for new construction and modernization in 1955 may reach an all time record of $60-billion, surpassing 1954's record of $54-billion.

* * *

WOW! THAT SERIOUS?

Read Admiral John R. Perry, Chief of the Bureau of Yards and Docks, told members of the American Society of Civil Engineers in recent annual meeting in San Diego:

That "through the establishment of pilot shops we are making great strides in establishing and perfecting procedures applicable to the component parts of the various facilities to be maintained."

Hope there were no spies present that could report back the innermost secrets of this program.

NEWS and COMMENT ON ART

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an exhibition of paintings by Dorothy Bowman and Howard Bradford; sculpture by David Lemon, and New Color Ceramics by James Lovera, during April.

A special selection of English, French, Italian and Pacific Coast prints are being shown in the Little Gallery.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., offers a number of special exhibitions and events for this month, including the following:

EXHIBITIONS: Masterpieces of Drawing from the Museum of Besancon, France; the fifty-five drawings in this exhibition, from one of France's most important museums, are being shown in San Francisco for the first time. The two following exhibitions have been arranged by the Legion of Honor in conjunction with the presentation of the Besancon drawings: Old Master Drawings and Contemporary Drawings from the museum collections, augmented by notable works from local private collections. Paintings by Van Day Truex and Paintings by Hanna Kali; Art of the Ancient

(See Page 35)

SAN FRANCISCO MUSEUM OF ART
WAR MEMORIAL BUILDING, CIVIC CENTER

Portrait of

SARAH STEIN, 1916

oil

22x22

By

Henri Matisse

The Saroh and Michael Stein Memorial Collection of the San Francisco Museum of Art.

Gift of Mrs. Walter A. Haas.

BUILDING WITH THE WEST

TECHNICALLY SPEAKING

WOODWORK INSTITUTE OF CALIFORNIA

UNITIZED AND PORTABLE CASEWORK FOR SCHOOLS

As mentioned in preceding articles of this series, one of the major services rendered by the W.I.C. to the architectural and engineering profession of California and also Western building was the publication and distribution of the "Manual of Millwork" which set up standards for this phase of building construction. Now, we are priveleged to announce that within the fortnight the Woodwork Institute of California will publish another book to be entitled "DETAILS OF MILLWORK" the outstanding feature of which will deal with some thirty-two pages of specifications and drawings of portable and unitized casework for schools.

This excellent book is the result of much demand by school administrators, teachers, trustees and architects for casework in classrooms that would be flexible. The end result obviously was to make the casework investment more adaptable to modern trends of teaching and reduce maintenance overhead, besides procure better equipment per dollar invested. The groundwork was laid by the Technical Staff of W.I.C. in cooperation with supervisory personnel from the State Department of Education and several consulting architects, designers and enginers. The Guide for Planning School Plants as issued by the National Council on Schoolhouse Construction was carefully studied. Classrooms where portable casework had been used for one year or more were visited and the opinions, suggestions and criticisms of the teachers who had actually used the casework were noted and duly considered.

Following all this study and research the W.I.C. Technical Committee went to work. Every design was examined. Dimensions were checked, joinery details were made in accordance with the best practices, out of all this the preliminary drawings were made. Subsequently many re-drawings came off the boards, until finally a set was ready to submit to architects who specialize in school casework construction, school officials and teachers for their perusal and comments. Many changes were recommended and incorporated in the details and "specs" as a result of these checks. Finally, both the drawings and the "specs" were pronounced as fine and as good as current demands require, so the printing job went ahead.

Thus, quite soon, the architectural profession will have in its possession complete designs for casework that may be accepted as practical, substantial and entirely suited for the modern flexible classroom. All the units are subject to such variation as the architect may designate, but the WIC specifications and drawings are complete and no detailed architectural specifications are required.

The amount of research, work and experience that has gone into this project is monumental and would be utterly out of the question for a single architectural firm to do. The combined talents and training of the six members of the Technical Committee represents an array of knowledge on millwork that could never be justifiably employed by any one firm. The coordination of their efforts with the proper agencies and architects has made certain that their finding are usable and in a language that the architect must need employ.

Architects Across The Nation Are Saying WEBER FOR WALLS

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REPORT

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For this large building project, WeberWall ¾" semi-flush 2" thick panel partitions were selected.

The 2-story high partitions illustrated, with solid posts running from floor to cornice, and with both solid and glazed panels tiered between posts, are typical of the special conditions easily solved through the use of WeberWall.

A FEW OF THE MANY STEEL WEBERWALL USERS

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Shell Oil Co., Los Angeles
Chrysler Corporation, Los Angeles

WEBER IS ON THE MARCH

STEEL PARTITION SYSTEMS

SELF PARKING
Downtown Center Garage

San Francisco, California

ELLISON & KING, Consulting Structural Engineers

GEORGE A. APPLEGARTH, Architect

J. MARION THOMAS, Mechanical Engineer

CAHILL CONSTRUCTION CO., General Contractor

DAMES & MOORE, Soil Technologists

DOWNTOWN CENTER CORPORATION, Owner

The Downtown Center Garage is located on the edge of the concentrated retail shopping area and is surrounded by hotels, theatres, medical offices and restaurants. Nine floors with basement and roof provide twelve hundred stalls on eleven levels.

Double circular ramps extend from basement to roof, having a 12'6" and 14' clearance in width with a 9½ percent grade.

Construction is of reinforced concrete and the reuse of plywood forms for wall and ceilings with Sonotube forms for columns and Presan floor slabs resulted in great economy of construction.

The plan for handling cars on the ground floor is flexible, allowing for receiving and discharging cars on both streets.

This building is the result of four years of research and study by the architect on the design, construction, operation and financial return on parking systems, and many of the findings have been incorporated in this design. Its recent completion and operation have proven, among other points, that drivers prefer to park their own cars and lock them, and that where ramps are easy and safe they will drive up many stories.

This building is being enthusiastically patronized

(See Page 22)

PRESTRESSED PYLON TO RESIST EARTHQUAKE

By T. Y. LIN, Consultant on Earthquake Forces and Prestress Design. Professor, University of California.

A novel application of prestressed concrete is exemplified in the construction of a pylon 100 feet high to resist earthquake forces in a ten-story garage recently completed.

The 1200 car garage is located at the intersection of Mason and O'Farrell Streets, in the heart of downtown San Francisco. It occupies a rectangular area of 137'6" x 275'0".

GENERAL DESCRIPTION

Parking will be self-service type and customers will drive their cars over adjoining circular "up" and

ENTRANCE to LOBBY

GARAGE

as viewed from side street.

"down" ramps located at the exterior corner of the building. The maximum turning diameter of the outer (up) ramp is 93'0" and the minimum turning diameter of the inner (down) ramp is 38'0". Clearance between curbs on the "up" ramp is 11'0" and on the "down" ramp is 12'6". Up and down traffic moves in the same direction but the divided ramps have opposing slopes on a 10 per cent grade. The big majority of the stalls are accessible without the necessity of moving any other car. Ramp supports are placed on inner and outer edges of ramps and on the center dividing strip. Story heights generally are 8'6" floor to floor.

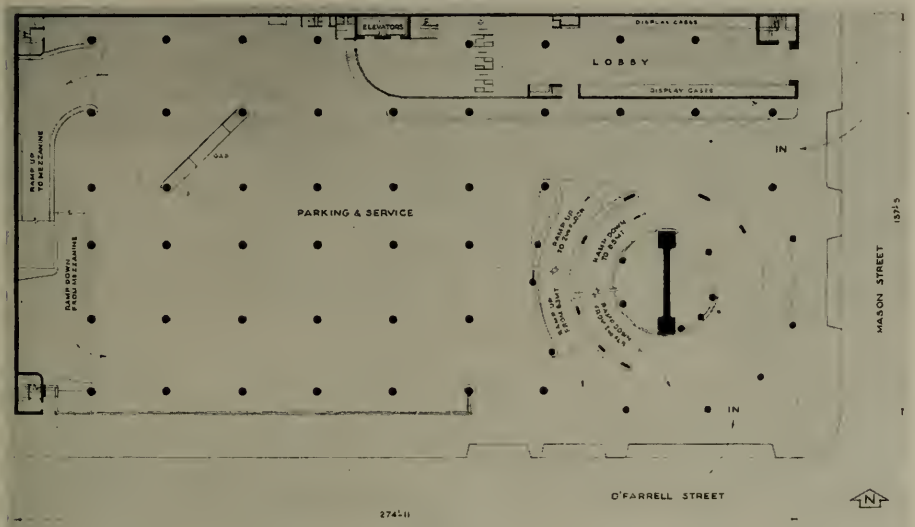
Round columns in the body of the building are spaced 26'6" o.c. east and west and 25'0" o.c. north and south. Each bay accommodates 2 cars parked on 45 degree diagonals in standard 8'0" x 18'0" stalls. One-way traffic aisles are 15'0" wide. Exterior columns on the two street fronts are placed 9'0" back from the building lines and the floor slabs cantilever 11'0" therefrom, including a 2'0" "eyebrow" extending beyond the street lines. The two street line elevations are open-front type.

Solid reinforced concrete bearing walls occur full length of interior north and west lot lines, full height from foundation to roof. Excepting three fireproofed steel girders carrying columns over the ramps in the entrance, the building is entirely of reinforced concrete construction.

Suspended floors are flat slab Presan type with tapered haunches in place of the usual drop panels and column caps. The use of Presan construction reduced each story height by at least twelve inches and also produced considerable savings in concrete and formwork.

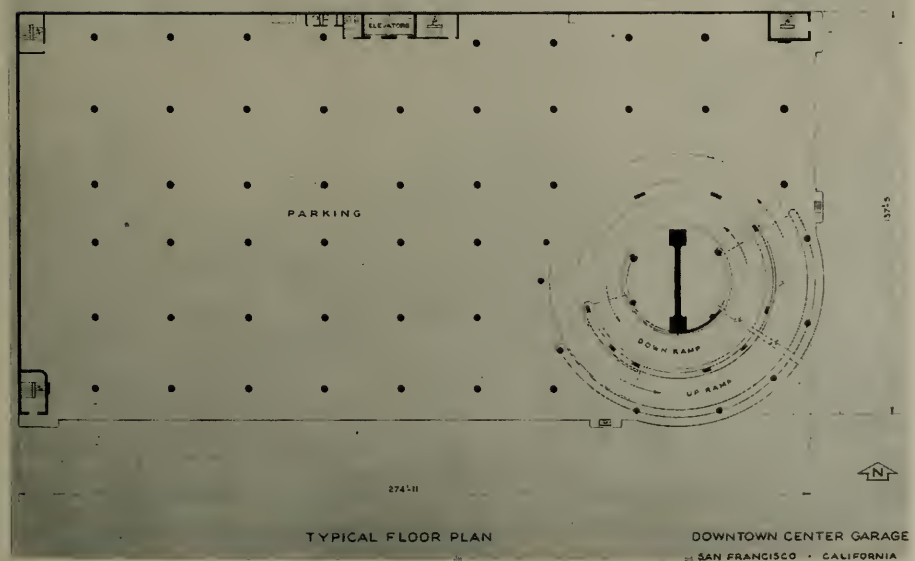
PRELIMINARY STUDIES

Walls along one side and one end only of a rectangular building do not form a stable structure under earthquake action and such a building would be subjected to enormous torsional moments which if not resisted by some additional elements could produce serious results. The situation was further accentuated by the fact that the rear and side walls of the building are in contact with adjacent buildings so that any serious movement might damage these structures in addi-



FIRST FLOOR PLAN

DOWNTOWN CENTER GARAGE
SAN FRANCISCO · CALIFORNIA



TYPICAL FLOOR PLAN

DOWNTOWN CENTER GARAGE
SAN FRANCISCO · CALIFORNIA

DOWNTOWN CENTER GARAGE . . .

CHECKING STATIONS

Conveniently located on ground level, adjacent to lounge area and automotive service department.

ENTRANCE LOBBY

Interesting merchandise displays line one wall of the entrance. Checking Stations are in rear.

tion to the garage itself.

First thoughts were turned toward utilization of the columns as resisting elements. However, shear in the columns would induce serious moments, which in turn must be carried by the adjacent slab, thus requiring heavy additional reinforcing for both columns and slabs. Furthermore, the flexibility of the columns for such a high building would result in serious lateral deflections under earthquake action. Hence some other solution had to be devised.

Several ideas were investigated and abandoned as being either impractical, too costly or too cumbersome. Finally a pylon on the north-south axis of the ramp, extending the full diameter between inner lines of the ramp and full height of the building was adopted as being a simple, practical solution and one that did not necessitate the loss of any car stalls.

PYLON CHARACTERISTICS

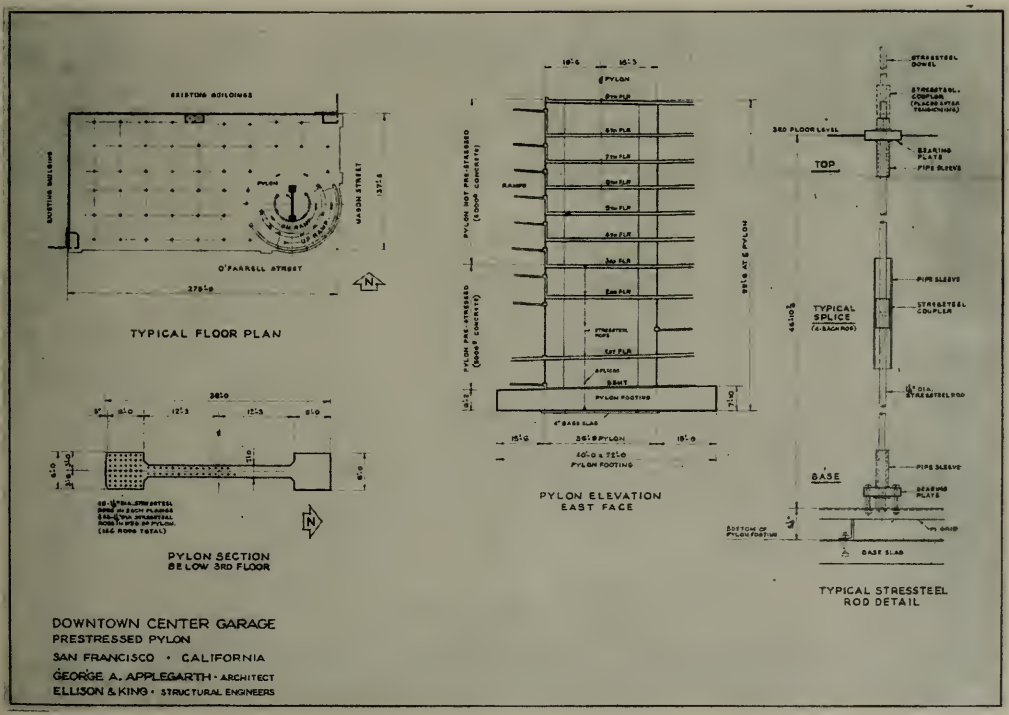
The pylon as built has an I-beam plan with the following dimensions: overall north and south 36'9"; flanges 6'0" x 6'0"; web thickness 2'0". Stresssteel reinforcement: in prestressed portion (foundation to 3rd floor) 49, 1⅛" dia. bars in each flange; in web 48, 1⅛" dia. bars. Intermediate grade reinforcement above 3rd floor: in flanges, varies from 49 No. 11 bars in 3rd story to 16 No. 11 bars in top story; web varies from 24 No. 9 bars in 3rd story to 24 No. 7 bars in top story. Pylon foundation dimensions 40'0" x 72'0", with an average thickness of 7'0", contains 750 cu. yds. of concrete which was placed and consolidated in six working hours.

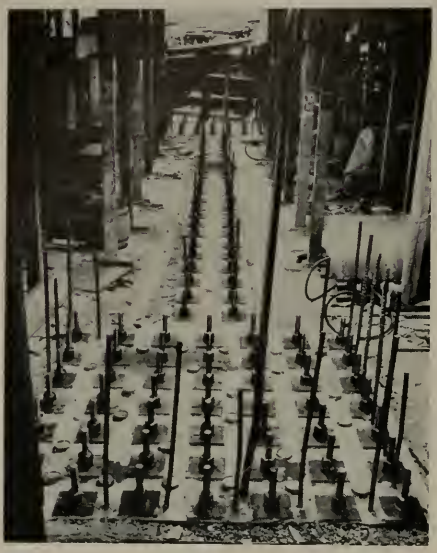
Pylon foundation reinforcement: 37 tons of intermediate grade bars in top and bottom and in both directions, of size and spacing to accommodate the bending moments.

CONCRETE STRENGTH

Pylon calculations were based on the use of 4000 pound concrete in the prestressed portion from foundation to 3rd floor, but actually 5000 pound concrete was poured in this portion of the work. Above the 3rd floor 4000 pound concrete was used and this type was also used in main building columns up to the 5th floor. All other concrete in the structure was of the 2500 pound variety. All concrete contained an admixture of Tricosal.

DETAILS . . . Prestressed Pylon.



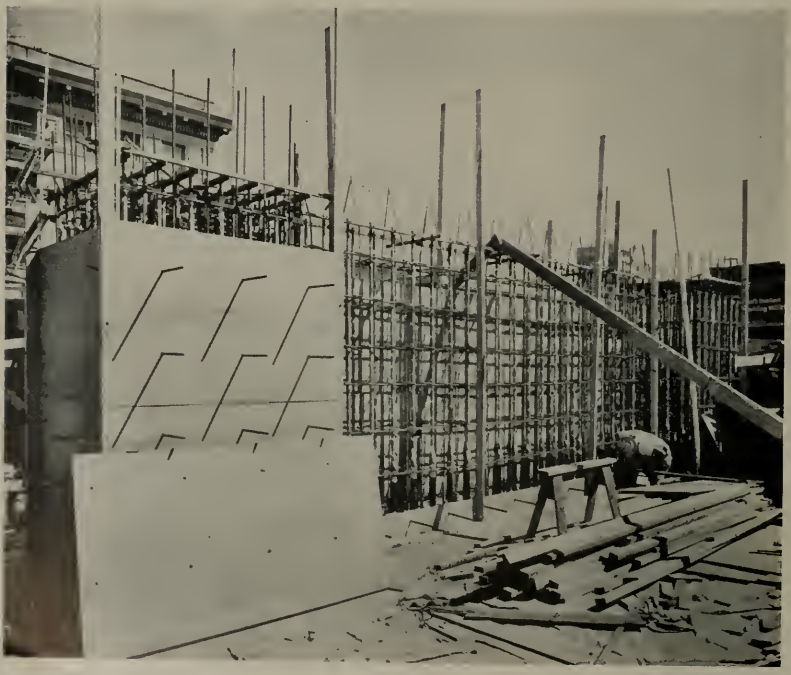


View of entire pylon at Third Floor level at completion of tensioning of Stressteel bars.

PYLON CARRIES 2,400,000 POUNDS HORIZONTAL FORCE

In order to picture the magnitude of the problem, it should be pointed out that the weight of the entire building is approximately 60,000 kips. The seismic coefficient specified by the San Francisco Building Code is 6 per cent gravity for a ten-story building. Hence the total horizontal force to be designed is 0.06 x 60,000 = 3600 kips, acting in any direction.

As is usual with lateral force design, the rigid concrete slabs at all floors are assumed to act as horizontal diaphragms transmitting shears and moments in the horizontal plane. The relative stiffness of the columns is very small and offers little resistance, so that lateral force is carried by the pylon and the interior lot line walls only. Under these conditions, earthquake in the N-S direction will be divided between the pylon and the west wall. Since the pylon is nearer to the center of the mass of the building than the west walls, it will carry 62 per cent of any earthquake force in the N-S direction. In the E-W direction, the pylon is quite flexible and offers practically no resistance to earthquake. Hence any earthquake in that direction will act eccentrically on the north wall, thus producing a torsion in the horizontal plane. That torsion, transmitted through the slab, is resisted by a couple formed



FIFTH LIFT of Stressteel Bars in Pylon.

by the west wall and the pylon. Thus an E-W earthquake will also exert a force on the pylon in the N-S direction, of about 30 per cent of the total lateral force in this case.

The maximum lateral force will be exerted on the pylon when an earthquake occurs at an angle of about 26 deg. with the N-S axis and as much as 68 per cent of the total earthquake force will be carried by the pylon in that case. Thus the pylon is designed for a lateral force of 68 per cent x 3600 or approximately 2,400 kips applied to it at the floors. The pylon is actually a vertical cantilever of 100 ft. span carrying the horizontal loading above mentioned. In accordance with the requirements of the Building Code the lateral force per floor is greatest at the top floor, diminishing gradually toward the basement. Hence the maximum bending moment at the base of the pylon is 148,000 ft. kips. Added to this is the fact that this moment acts either towards the north or south, thus producing a complete reversal during an earthquake.

ALTERNATE DESIGNS FOR PYLON

In view of the importance of the pylon design, several alternatives were considered. The first was a ver-

(See Page 22)

Tensioning crew in action. Note method of taking up elongation of bar with pin wrench. Split washer or shims at hand to slip into place when proper elongation is obtained.

View during tensioning operation at Third Floor Level.

Inspector at Chart is checking elongation of the Stressteel bars.

Note two jacks and two crews.

HOME: Mr. and Mrs. Norman Richard, Cottage Grove, Oregon

THOMAS BALSHIZER, Architect

WALLS—THAT CAN EVEN TALK

MODERN DESIGN FOR EXTRA LIVING

By ARTHUR W. PRIAULX

Music, and a whole new world of home entertainment, is rapidly becoming a part of the fabric of our everyday lives and is also becoming an important factor in furnishing and design of the modern home and apartment. How to absorb this newest phase of American living, popularized by the rapid expansion of television and high-fidelity is occupying the thinking and challenging the design talents of many western architects.

Just as the glass wall has opened up our rooms and modern homes to sun, air and space, the lives and homes of the mid-twentieth century westerner are being opened up to a great new world whose broadening horizons are sight and sound.

No longer are radio and records, home movies and television domestic miracles. We have grown accustomed to considering them a part of normal living. The real problem, then is how best to incorporate this new vista of family life into our home planning and this is the problem designers and architects have accepted with their usual enthusiasm.

Probably the most ingenious of the solutions is to be found in the music walls now being designed by western architects. Some of these architectural walls serve several purposes and are minor engineering triumphs. Most of them are compact, space saving. The music wall can be designed into any room of the homt and frequently is, but it is most popular in the den, family and recreation rooms.

Architect Thomas Balshizer cleverly incorporated a high-fidelity system, radio and music storage installation of blond-finished west coast hemlock in one wall of a very livable room in the Sam Rubenstein home at Eugene, Oregon. See photograph on page 21. The music unit appears as part of the wainscoting in this spacious room. A visible speaker unit and control dials are the only outward indication of the purpose of the unit which otherwise has been concealed in a series of matching pull-drawer cabinets. Above this unit a ceiling height magazine rack utilizes space.

A television set has been mounted at shoulder height in a corner shelf in the same room, back of a cozy service bar, so that it can be seen from every corner of the room. But, the set is out of the way and

BELOW: This lovely music wall becomes attractive paneled wall when panels are closed, but opens up to serve varied musical needs of the family. When not in use, television, radio and high-fidelity equipment is concealed.

HOME of Mr. and Mrs. Jack Bladine, McMinnville, Oregon.

ARCHITECT: George Whittier of Whittier & Fritsch.

unnoticed when not in use.

In the Norman Richards home at Cottage Grove, Oregon, Architect Balshizer designed a high-fidelity speaker into a masking wall at one end of a fireplace to separate the living space of this open-area home from the entryway. See photo on page 16. Area above the speaker was filled with a free form suspended shelf which lends an illusion of added size to the living room yet performs the function of a screen.

The speaker is remotely operated, with control panels, and the mechanism for high-fidelity, radio and phonograph contained in a compact unit on another wall. This is a wall of full panels, one of which slides open to expose the control panel and record changer. The wall contains, as well, storage compartments for records, sheet music, musical instruments and other gear of a music loving family. By locating the control panel at a distance from the speaker, it is possible to get a much better adjustment of tone in the high-fidelity equipment. In the case of the Richards home, the speaker is some ten feet from the control panel.

Architect Morgan Hartford used one corner of a fifty-foot long living rom in the home of Dr. John G. Manning at McMinnville, Oregon, for the music center, but cleverly concealed the unit in two cornering walls of bookcases. See photo on page 20. Extra wide shelving in one wall holds an extensive record collection as well as the speaker unit and control panel. The

HIGH-FIDELITY has been designed in this wall of den-trophy room with speaker concealed above in overhang. Location of certain music equipment is important to avoid imposing hobbies and interests of some members of family on all.

HOME: Mr. and Mrs. Frank Graham, Jasper, Oregon.
ARCHITECT: Graham B. Smith.

HOME: Mr. and Mrs. Cy Goldberg, Longview, Washington.
ARCHITECT: Lawrence Rice.

THIS all-purpose room divider contains complete music wall on one side and serves to separate family from entryway. Even compartment for piano has been provided in design.

other wall has conventional height shelving for selected groupings of books on music and the arts. One feature of this high-fidelity installation is a series of remote speakers throughout the home, which can be individually controlled in kitchen, utility room or bedrooms. Television in the Dr. Manning home has been installed in an elaborate recreation room on the floor below the living room.

In the Cy Goldberg home at Longview, Washington, Architect Lawrence Rice has designed a compact, all-purpose music wall which forms one side of a beautiful birch-paneled family room, and acts as a partial screen between the exposed entryway. See photo above. This full music wall has a depth to accommodate a standard television set, high-fi equipment, phonograph, speakers and record storage cabinets. A spinet piano fits into a special compartment, but it can be moved out if desired.

Architect Graham B. Smith has solved the problem of location of the music wall in the Frank Graham home at Jasper, Oregon, where a large family has varied interests. See photo on page 18. In the study-den of the owner is an ingeniously installed high-fidelity system cleverly fitted into a trophy wall built up of well-matched Douglas fir. The speaker has been concealed in the ceiling of an overhanging section with hi-fi equipment placed behind cabinet doors and these match several similar doors which conceal rows of trophy shelves. The den is large enough to accommodate all of the family when they are in the music mood.

In many homes, television and music share the warm appeal of the fireplace as interest centers for the family evenings at home. Architect George Whittier, of Whittier and Fritsch, has created a most interesting music unit in an architectural wall adjoining a fireplace in the home of Mr. and Mrs. Jack Bladine at McMinnville, Oregon. See photo on page 17. When not in use, the music wall appears as a well designed panel section flush with the fireplace face and making up the greater part of one living room wall. But, behind sliding panels of mahogany is a music lover's paradise. One panel

conceals the high-fidelity set, when not in use, and the phonograph is installed in a pull drawer. The television set is out of sight behind another panel and the speaker for all music units can be hidden by sliding a panel. Other panels shield extensive shelving for the record library, as well as additional storage space for games.

One interesting feature of the Bladine music wall is the engineering and accessibility. This wall is deep enough to include all the complex recording and amplifying machinery needed for the several units, and at the same time there is ample room within this wall section for a repairman to work if such attention is needed around the television set, or the radio and phonographic equipment. Entry to the inner workings of the wall is gained through a door built of the same paneling as the wall and hung in a short hallway connecting living room with an adjoining den.

Not all families are addicted to high-fidelity, but most homes today share the popular appeal of television, and it is in searching for a spot in the home for television that architects have had an opportunity for considerable variety. In fact, television has created an entirely new problem in space and use allocation in many homes. Renewed interest in the family room may have been one of those spontaneous developments, but there are many who feel that a desire to include television viewing and enjoyment in the home has stimulated the reawakening interest in both the keeping room and the family room, common generations ago.

Architect John L. Reynolds developed a remarkable music wall of west coast hemlock in a family room of the new Phil Tillman home in Eugene, Oregon. High-fidelity speaker is built high up in this tall, narrow wall which separates kitchen from family room in an extended wing of the rambling home. Control panels are almost concealed. The television set has been left free against this high wall and may be wheeled around for the convenience of the sizable group which the room can accommodate.

There are many new ways to install television sets, which because of their size and bulk are sometimes difficult to handle as furniture. One way is to conceal the unit completely until it is needed. For instance,

BY locating radio and high-fidelity control panel and speaker in the center of a bookcase installation, it is effectively disguised. Music library is close to phonograph which has been installed behind tiny twin cabinet doors.

HOME:

Dr. and Mrs. John G. Manning,

McMinnville, Oregon.

ARCHITECT:

Morgan Hartford

the depth created by a chimney may be used to countersink the bulky mechanism. Folding doors close away this set when not in use. A pull-out drawer brings the set out into the room. And, it may be mounted on a swivel so that it can be turned to give widest possible viewing angle.

The sets can be built into architectural storage walls, as we have shown in several northwest homes. In some cases, open magazine shelves provide an interesting variety around the set whether it is left permanently exposed to view or is shut away behind panel or sliding doors when not operating. An unusual variation is the adaptation of small louvered doors in architectural walls which give remarkable texture to a wall.

For the family with no definite room for their television viewing, the nuisance of having the set under foot is solved by building a section in a storage wall where it can be run out of the way during the day and then rolled into any room when wanted.

Television tubes average from 20 to 29 inches in depth and are undoubtedly the deepest pieces of furniture in the home, therefore the most difficult to arrange without appearing awkward in most decorative schemes. Some designers have solved this problem, as Thomas Balshizer did in the Rubenstein home, by placing the television set in the corner. There are a variety of ways to corner your television equipment, all of which solve the nuisance of depth. If placed in a corner surrounded by cupboards, just add another matching cupboard door and your set is out of sight except when viewing. This is easy if the set is a console model resting on the floor. For the table models, it may be desirable to install them higher up in the corner, surrounded by bookcases and even then the set can be shielded with a slide-over door when not wanted.

Some architects have discovered a way to break

(See Page 32)

THIS audio wall is set out to give depth for high-fidelity and radio equipment and forms counter-height line with rest of wainscoting. Magazine rack adds to usefulness and charm of this particular corner of the family room.

HOME: Mr. and Mrs. Sam Rubenstein, Eugene, Oregon.
ARCHITECT: Thomas Balshizer.

"ENGINEER and WELFARE"

By EDWIN A. VERNER*,
Civil and Structural Engineer

We might define the Professional Engineer as one who economically directs man-power and, by scientific design, utilizes the materials and forces of nature for the benefit of mankind.

To re-phrase a recent Dodge Publications editorial: "Engineers are not asking for praise during these seven days set aside in their honor. What they seek is something infinitely more basic. They earnestly aspire to recognition as an independent, vitally important profession, and they want to reclaim the title of that profession from wide misuse as a synonym for such words as 'technician' or 'self-styled expert'."

Under the chairmanship of Henry J. Brunnier, who is a world-renowned engineer, Rotarian and AAA President, Bay Area engineers with thirteen local societies participating have set out to explain their profession to the public by a series of lectures, programs, displays, and other activities in what is probably one of the most ambitions Engineers' Week observances in the nation this year. This public relations endeavor, initiated by the President of our nation and devised and implemented by the engineers themselves, has been sustained by industry, which has alone borne the monetary burden.

The ancients believed that it was Atlas who physically held high the known world of those times. Today we know that it is, figuratively speaking, a human pillar of fortitude which actually supports our material universe. This creature is the engineer. It is he who has so modestly and energetically devised the core, the sinew, and the very pulse of all contemporary works fashioned **by** civilized man **for** the comfort, the development, and the protection **of** civilized man.

Our alleyways, our highways, our bridges with their bicycles, trucks and automobiles, our toys, our fortresses, our homes and their automatic appliances, our great power and irrigation works with their corollary drinking supply, sanitary disposal and flood control features, our weapons for defense, the towers of our industry, our water transport and our skyscrapers, our communications, refrigeration, rail transport and flight are all brought to our hands by the guiding presence of that modern day Atlas, the engineer.

Who is this individual, and what exactly does he do, in order to be able to do what he does?

He is an idealist who early submits himself to a realistically rigorous and disciplined thinking in his studious pursuit of mathematics and the applied sciences. He does this from grade school forward without necessarily stopping upon graduation from his university. As he advances in the outside world he specializes and as he specializes he refines his thinking with studies that his work and the writings of his colleagues afford him.

About two centuries ago an engineer planned and had built a road, complete with bridges, extending all the way from the Atlantic Coastline through the Alleghanies and the Cumberland Gap to the banks of the Monongahela River. This route as established by him then is the one followed even to this day by our U.S. Highway No. 40.

This same engineer, by his provident courage and sacrificial endeavor, was the very inspiration of our national being and he became our first President, General George Washington, Engineer.

In lighter vein we discover that engineers, who always make good citizens, have lately found themselves the object of formidable statistical recognition on a nationwide scale: of all groups, with the obvious exception of the clergy, professional engineers are the least to be found either as primary, secondary or even tertiary figures in civil divorce proceedings. Engineers make good neighbors. Some become leaders in Boy Scouting, in civic enterprise, and in church work. Some write, some teach and many rise to pre-eminence, such as, for example: our James Black, President of the Pacific Gas and Electric Co.; Charles F. Wilson, Secretary of Defense; Dr. Robert Gordon Sproul, President of the University of California; and Hon. Herbert Clark Hoover, a man of singular contemporary greatness. The purpose in such generalization or, if you please, eulogization, is to lay the background for the heart and fiber of this address:

Last year, with only 19,000 engineering degrees granted within the nation, industry alone asked for 32,000 such graduates.

With a current engineer population of 484,000, it is estimated conservatively that our nation will require 800,000 by the end of 1960.

It has been reported that last year the U.S.S.R. graduated 54,000 engineers, nearly three times as many as did we.

Our possession of the materials of peace and therefore of defense is clearly a direct function of our engineer population.

We do not now possess the trained engineering per-

(See Page 33)

*NOTE: *Presented herewith is the substance of an address made before the Knights of the Round Table at the Sheraton-Palace Hotel, San Francisco, in conjunction with national observance of "Engineers Week."—Editor.*

DOWNTOWN CENTER GARAGE

(Continued from Pages 9 and 15)

PRESTRESSED PYLON TO RESIST EARTHQUAKE

tical steel truss which necessitated members up to 200 sq. in. in cross section. Such a truss would have to be fireproofed with concrete and was not only too expensive, but would result in excessive horizontal deflection at the upper floors. The second alternative was a reinforced concrete truss. This would be somewhat more rigid and less expensive, but secondary stresses could not be handled economically and the design was abandoned.

The third alternative was a reinforced concrete pylon, not prestressed. This required a steel area of 430 sq. in. at the base, diminishing toward the top. The computed deflection of the pylon, unfortunately, was still too high. Under the design earthquake forces, the maximum deflection at the top of the pylon would be about 1.5 inches. This would result in appreciable moments in many columns and would necessitate a large amount of additional reinforcement in them and in the adjacent slabs.

PRESTRESSING TO REDUCE PYLON DEFLECTION

To further reduce the pylon deflection, the possibility of prestressing was then investigated. By prestressing vertically, the concrete can be put under compression at all times so that the entire section of the pylon concrete can be effective in resisting deflection.

The major part of the deflection was caused by the bending in the lower portion of the vertical cantilever. Hence by prestressing only the lower 40 feet of the pylon, the deflection at the top can be reduced to 0.5 inch. With this amount of total deflection in ten stories, the moments induced in the columns can be carried without additional steel reinforcement, thus resulting in a worthwhile economy not otherwise possible. The cost of the pylon itself, however, was not reduced by prestressing.

DESIGN OF PRESTRESSED PYLON

The amount of prestress required was determined by the condition that no tensile stress would exist in the pylon under the action of earthquake forces. Thus:

Stress due to moment of 148,000 k. ft.....	± 925 psi.
Stress due to weight of pylon.....	— 104 psi.
Stress due to weight of tributary floors.....	— 52 psi.
Stress due to prestress.....	— 769 psi.
Resulting maximum stress.....	—1850 psi.

Since 1/3 increase in the allowable stresses is permitted for lateral forces, the normal permissible stress 1800 psi. can be increased to 2400 psi. for 4000 psi. concrete. Hence the maximum stress of —1850 psi. is quite safe.

The factor of safety against cracking was determined as follows:

Considering a modulus of rupture of concrete at 0.15, f_c' is 600 psi., thus

$$\text{Factor of Safety} = \frac{925 + 600}{925} = 1.65$$

which indicates that the concrete will not begin to crack until the design earthquake force is exceeded by 65 per cent and acting in the worst possible direction. Because of the margin of safety reserved in the structure so designed, it was deemed unnecessary to bond the prestressing steel to the concrete, although it would have further increased the ultimate strength.

In order to resist lateral forces without tension in concrete it is necessary to prestress the entire concrete area to 769 psi. This requires a total force of 13,300 kips which can be supplied by either high tensile wires, strands or bars. Since the steel has to be erected vertically, the use of either wires or strands would require additional scaffolding. Hence Stressteel bars were selected for use. To further simplify the erection, the 47 ft. bars were ordered in five lengths with bars spliced at each pour height of about 10 ft. These bars are manufactured with tapered threads so as to

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DOWNTOWN CENTER GARAGE

(From Page 9)

by the public, and it is interesting to note that the majority of the shopping customers are women.

The reduction of employees to a skeleton crew by electrical controls has so reduced the operating cost that parking charges are far below those of garages using attendant parking. Rates are so low that validation is readily accepted by stores and businesses.

Push-button control directs drivers to the floors to be filled and from wide aisles cars are parked at 45 degrees in stalls 8′ to 8′6″ wide. The ease of entrance and exit with no waiting gives opportunity for large and rapid turnover.

Fully automatic elevators provide transportation down to the lobby and pedestrian exit.

On returning for their cars patrons pass through the lobby to cashiers, then taken elevators back to their cars and descend by the down ramp to the street.

The majority of stores and businesses are validating parking tags so that patrons are getting much free parking.

To satisfy the desires of the driving public, to aid downtown stores and businesses and to create a paying investment, self-parking, locking of cars and validation of parking time should be features of all modern garages.

develop approximately 98 per cent of their full strength at splices and end anchorages. With 1⅛" bars stressed to an initial value of 110 ksi. a final effective prestress of 95 ksi. can be attained. A total of 146 bars was employed in the pylon section.

Maximum principal tensile stress occurs at the junction of the flange and the web and is computed to be 140 psi. under the design earthquake force. This corresponds to 0.035 fc′ and is allowable. Stirrups are provided in the web to provide additional resistance against such tension and mild steel bars spaced around the exterior faces of the pylon serve as shrinkage and spacing bars. Although the maximum prestress was required only for the base of the pylon, the same amount of steel is used for the entire lower 40 ft. At the junction of the prestressed and non-prestressed portions of the pylon, splices are provided between the Stressteel and the ordinary reinforcing bars. Stressteel couplings are used at the top of the prestressing bars and dowels 6 ft. long are connected to the couplings.

TRAVELING EXHIBIT TO TOUR NATION

PRODUCERS COUNCIL PLANS BUILDING PRODUCTS CARAVAN

William Gillett, president of the nation's largest association of building products manufacturers, announced today his organizations, Producers' Council, Inc., had signed a contract with a Chicago firm to build and manage a $180,000 traveling building products exhibition. The show, Caravan of Quality Building Products, will begin touring the nation next September.

The Caravan is the second traveling exhibition to be sponsored by the Council. The first successfully completed a nationwide tour of 34 cities last November. This year's version, a completely different show, will be exhibited in 36 major marketing areas where the organization operates chapters. These local groups will be the host at each showing.

The 1955-56 Caravan will have approximately 50 exhibits covering all types of building materials. After a premier showing in Chicago, it will be on tour for 36 weeks, exhibiting before invited audiences of architects, engineers, contractors, builders, dealers, students, building owners and managers and government officials. In addition it will be one of the attractions at the Council's Annual Meeting and Chapter Presidents' Conference next October in Detroit.

The Caravan technique of exhibiting was adopted by the Council to provide its chapters regularly with a top quality materials exhibition. This method of exhibiting also has the advantage of taking the show to the audience, instead of waiting for potential viewers to come to conventions or meetings at which materials are displayed.

The Caravan will be built and managed on tour by the General Exhibits and Displays Co., Inc., Chicago. Construction of the show will take five months. It will be transported in a specially fitted van, and will be exhibited in hotels, auditoriums or exhibition halls in 36 cities.

Show dates for the Caravan are as follows: Chicago, September 7 and 8; Indianapolis, September 12 and 13; Louisville, September 16; Columbus, September 20; Pittsburgh, September 27 and 28; Detroit, October 3 and 4; Toledo, October 7; St. Louis, October 13, 14 and 15; Kansas City, October 19 and 20; Memphis, October 25 and 26; Baltimore, November 1.

Washington, November 4; Philadelphia, November 9 and 10; New York, November 15, 16 and 17; Boston, November 21 and 22; Newark, November 28; Buffalo, December 1 and 2; Cleveland, December 7, 8 and 9; Cincinnati, December 12 and 13; Charlotte, January 6; Atlanta, January 9; Birmingham, January 12 and 13; Jacksonville, January 17 and 18; Miami, January 24; New Orleans, January 31 and February 1.

Houston, February 7 and 8; Little Rock, February 16 and 17; San Antonio, February 21 and 22; Dallas, February 28 and 29; Los Angeles, March 6 and 7; San Francisco, March 13 and 14; Portland, March 20 and 21; Seattle, March 26 and 27; Denver, April 6; Minneapolis, April 12; and Milwaukee, April 17 and 18.

Participating in the Caravan will be Aluminum Company of America, American Air Filter Company, American Radiator & Standard Sanitary Corporation, Kewanee Ross Corporation, Armstrong Cork Company, The Art Metal Company, Ceco Steel Products Corporation, The Celotex Corporation, Congoleum-Nairn, Inc., Crane Co., Detroit Steel Products Company, Michael Flynn Manufacturing Company, The B. F. Goodrich Company, Granco Steel Products Company, and E. F. Hauserman Company.

Also exhibiting are Hough Shade Corporation, Hunter Douglas Corporation, Johns-Manville Sales Corporation, Josam Manufacturing Company, Kentile, Inc., Koppers Company, Inc., Levolor Lorentzen, Inc., Libbey-Owens-Ford Glass Company, The Mills Company, Minneapolis-Honeywell Regulator Company, The Mosaic Tile Company, Natco Corporation, Nelson Stud Welding Division-Gregory Industries, Inc., New Castle Products, and Otis Elevator Company.

The Pittsburgh Plate Glass Company, S. H. Pomeroy Company, Truscon Steel Division-Republic Steel Corporation, Reynolds Metals Company, Rohm & Haas Company, Sargent & Company, Schlage Lock Company, The Stanley Works, U.S. Plywood Corporation, Westinghouse Electric Corporation, Zonolite Company, and J. A. Zurn Manufacturing Company also will be represented with exhibits.

Also participating are two trade associations: Structural Clay Products Institute and Architectural Terra Cotta Institute.

La MIRANDA RESIDENTIAL DEVELOPMENT

Southern California

DECORATIVE STONE

A steadily increasing preference for individuality in West Coast homes is giving new importance to distinctive, low-cost building products.

Extensive examples throughout Southern California's newly developed residential areas are an indication of how well the texture, colors and shape of decorative stone fit the styling associated with informal Western living. In each housing development, as the La Mirada community, both a stone veneer and structural block were selected to add impressive richness to home fronts, fireplaces, patio, walls, planters, and chimneys.

Successfully adapted to every architectural design, due largely to its complete versatility and economy, over a thousand La Mirada homes feature this masonry product with a wide variety of ways. The Devon Con-

(See Page 36)

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L. A. Ferris, Chairman; Aloysius McDonald, Secy-Treas. Members: Russell Mills (Reno), Edward S. Parsons (Reno), Richard R. Stadelman (Las Vegas). Office 1420 S. 5th St., Las Vegas, Nevada.

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A.I.A. 87TH CONVENTION

President Clair W. Ditchy, A.I.A., has announced "Designing for the Community" will be the theme of the 87th Annual Convention of the Institute, to be held June 20-24 in Minneapolis, Minn.

PASADENA CHAPTER

Hunt Lewis, Southern California industrial engineer, was the principal speaker at the April meeting held in Pasadena. Lewis, a graduate of Princeton University with M.F.A. degree in architecture, illustrated his remarks with lantern slides.

An Architects Exhibit has been planned for May 28 to June 11, to be shown in banks, building and loan association offices, furniture stores and interior decorator shops throughout the city.

WOMEN'S ARCHITECTURAL LEAGUE OF SAN FRANCISCO

Mrs. Barbara Gillard, author of "Pass Me Another," "Potluck" and "Clockwise," was the speaker at the April meeting held in the home of Mrs. Norman Blanchard, San Francisco.

COAST VALLEYS CHAPTER

"Planning" was the subject of the April meeting held in Palo Alto, with Donald Reay, visiting Professor of City Planning at the University of California, the guest speaker. Reay was Chief Architect for the Stevenage Development Corp. in England, and following World War II had occasion to become familiar

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

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Pasadena Chapter:
Henry C. Burge, President; William H. Taylor, Vice-President; Douglas Byles, Secretary; Edward Davies, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
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San Joaquin Chapter:
Alastair Simpson, President; Robert C. Kaestner, Vice President; Philip S. Buckingham, Secretary; Alan Daley, Treasurer. Directors: David H. Horn, Fred L. Swartz, John P. Miller. Office of Secy., 1922 Clinton Ave., Fresno 3, California.

Santa Barbara Chapter:
Roy W. Cheesman, President; Robert I. Hoyt, Vice President; Glen G. Mosher, Secretary; Wallace W. Arendt, Treasurer. Executive Committee: Robert I. Hoyt, Wallace Arendt, Roy Wilson, Lewis Storrs. Office of Secy., 116 E. Sola St., Santa Barbara, California.

Southern California Chapter:
William Gless Balch, President; S. Kenneth Johnson, Vice-President; Stewart Granger, Secretary; Stanley R. Gould, Treasurer. Directors, Cornelius M. Deasy, Herman Charles Light, George Vernon Russell, Ulysses Floyd Rible. Executive Secretary, Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
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Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Robert L. Durham, President; Francis E. Huggard, 1st Vice-President; Thomas F. Hargis, Jr., 2nd Vice-President; Barney E. Grevstad, Secretary; Lloyd J. Lovegren, Treasurer. Miss Dayis Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter:
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors, Kenneth Storment, Victor L. Wulff. Office of Secy.: 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President Harry W. Seckel, Vice President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P. O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS
Malcolm Reynolds, President; Henry L. Wright, Vice-President; George Lind, Secretary; John Bomberger, Treasurer. Miss Rhoda Monks, Office Secretary, Offices, 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BOARD ARCHITECTURAL EXAMINERS:
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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tasker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

with the Newton developments in England. The speaker also discussed a number of Northern California planning problems.

OREGON CHAPTER

The April meeting, held in the Multnomah Hotel in Portland, was devoted to the annual Producers' Council "Table-Top" program of building material exhibits, while the regular A.I.A. April meeting heard Justine Reinhardt, attorney, speak on legal phases of architectural practice.

EAST BAY CHAPTER

Don Kirby, San Francisco architect and Regional Director of The American Institute of Architects, will be the principal speaker at the April meeting discussing various phases of the national A.I.A. policies.

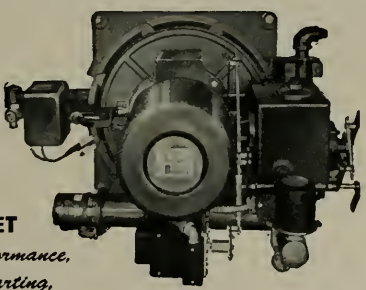
CALIFORNIA COUNCIL OF ARCHITECTS

The battle to revise California's Architectural Practice Act is in full swing in the California State Legislature. Chief objection to the measures submitted is that they conflict with work done by a number of allied building industry groups.

WOMEN'S ARCHITECTURAL LEAGUE OF PASADENA

The April meeting, held March 31st, was devoted to the subject of "Lithography," with Chang Reynolds, well-known lithographer, the principal speaker. Reynolds discussed the history of lithography and explained how lithographs are made.

The meeting was held in the home of Mrs. Robert H. Ainswrth, Sierra Madre, with Mrs. Ronald Russell serving as program chairman.



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Structural Engineers Association of Northern California

Howard A. Schirmer, President; Walter L. Dickey, Vice-President; Harry B. Corlett, Secretary; Cecil H. Wells, Jr., Asst-Secy; William K. Cloud, Treasurer. Directors, William W. Brewer, Walter B. Dickey, Wesley T. Hayes, Jack Y. Long, Michael V. Pregnoff, Clarence E. Rinne, Howard A. Schirmer. Office of Secy., 411 Market St., S. F.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy-Treas. Directors, C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

Louis J. Alexander, President; Nathan D. Whitman, Jr., Vice-President; David L. Narver, Jr., Vice-President; Jack E. McGee, Secretary; Gilbert W. Outland, Treasurer. Directors: Trent R. Dames and Sterling S. Green. Office of Sec'y, 1201 E. California St., Pasadena 6.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

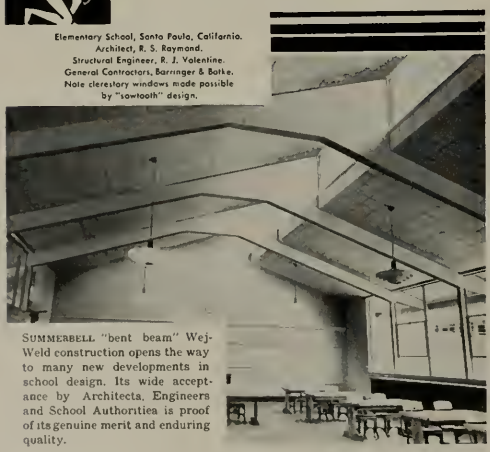
"Recent Applications and Research in Prestressed Concrete" was the subject of a talk by Prof. T. Y. Lin, Professor of Civil Engineering at the University of California, at the April meeting.

Professor Lin, just returned from a one year's stay in Europe with a Fulbright award to do advanced research in prestressed concrete, illustrated his talk with slides showing prestressed structures in California and elsewhere, and a sound motion picture was shown describing tests run by the speaker at Professor Magnel's laboratory in Belgium.

New members include Louis Chan, James A. Dunlap, Gerald V. Jacobs, Arthur W. Miner, John Blair Tulloch, David Allen Welisch; affiliate members, Charles W. Collins, Jr., John E. Jones, Herman Lopez, Bruce R. Schoenfeld, Leonard A. Whittlesey.

Summerbell for SCHOOLS

Elementary School, Santa Paula, California. Architect, R. S. Raymond. Structural Engineer, R. J. Valentine. General Contractors, Barringer & Batke. Note clerestory windows made possible by "sawtooth" design.



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FEMINEERS

Mabel Burrowes, interior designer, was the principal speaker at the April meeting held in the Women's Athletic Club, San Francisco.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Appointment of all standing committees for the year 1955 has been completed, as are special committees which will serve in connection with the 1955 Annual Convention, scheduled to be held October 6-8 at Yosemite.

Ted Newman, named General Convention Chairman by President G. A. Sedgwick, reports advance indications point to a larger attendance than at any previous convention.

AMERICAN MILITARY ENGINEERS 35TH ANNUAL MEETING

The 35th Annual Meeting of the Society of American Military Engineers will be held in the Waldorf-Astoria Hotel in New York on May 5-6. The two-day sessions will represent timely discussions of vital interest to engineering and national defense, with both military and civilian engineers taking part.

Separate sections will be provided for Army, Navy, Air Force, Construction and Education.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

"Levee Maintenance and the Public Domain" was the subject of a talk at the April meeting by H. G.

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Sec.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Sec'y—548 S. Spring St., Los Angeles.

Structural Engineers Association of
Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

Stevens, prominent San Francisco yachtsman and vice-chairman of the Mayor of San Francisco's Waterfront Committee.

The discussion was related to a recent controversy with the Sacramento District, Corps of Engineers, U.S. Army, and the California State Board of Reclamation regarding the cutting down of trees and shrubbery along the levees of the lower Sacramento River.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Robert L. Olson, Manufacturing Chief of Nuclear Engineering and Manufacturing Department of North American Aviation, Inc., was the principal speaker at the April meeting.

Taking as his subject "The Design and Construction of Sodium-Graphite Power Reactors," Olson described the functioning and design features of sodium-graphite power reactors. He also discussed the fabrication and construction methods now being employed, supplementing his discussions with slides illustrating work in progress. A scale model reactor was also exhibited.

New members include Peter F. Einik (allied); Mamoru E. Kanda, Elimelech Sandler, Robert W. Spracklen and Robert H. Stivers (junior); John C. Loevenguth, David L. Messinger, Warren A. Minner, Harry G. Petrey and Jack L. Randall (associate).

ENGINEER FREDERIC F. HALL DIES

Frederic F. Hall, civil and structural engineer whose career ranged from work on the San Francisco City Hall to the still uncompleted Union Oil Company of California tower being created on the company's main building in San Francisco, died of a heart attack the latter part of March.

Hall contributed to the structural design of more than 1000 buildings, including the San Francisco War Memorial Opera House, Pacific Gas & Electric Building on Sutter Street, San Francisco; the Hoover War Library Tower at Stanford University; the Cyclotron Building and many others at the University of California in Berkeley.

Member of the American Society of Civil Engineers, he was a partner in the firm of Hall, Pregnoff and Matheu.

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment
(Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Carl B. Frank
Detroit Steel Products
921 Larkin Street

Vice-President, John C. Cowley
The Brookman Co., Inc.
2833 Third Street

Secretary, John J. O'Connor
H. H. Robertson Company
306 Sharon Bldg.

Treasurer, Phillip F. Brown, Jr.
Otis Elevator Company
No. 1 Beach Street

Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

As in previous years the San Francisco Chapter of the Producers' Council is sponsoring a Table-Top Meeting to be held in the Terrace Room of the Fairmont Hotel on April 27. About fifty member companies will display their latest products. This year particularly it will be very interesting to see all of the innovations that the manufacturers have brought out in their products.

Invitations will go out to about 360 architects and 110 engineers—in all 600 guests are expected to attend the meeting. The guests are invited to arrive at 3:00 P.M. and will tour the exhibits. At 5:30 cocktails will be served.

The chairman of the Table-Top Meeting is Mr. R. O. Nicolaisen of the Johns-Manville Sales Corporation.

COMING EVENTS

The May educational meeting will be held on May 16 at the Athens Club in Oakland at 12:00 noon. The guest speaker will be Mr. Ed. Nelson of the Johns-Manville Industrial Sales Division. The subject of his speech will be the mining, milling and manufacture of asbestos fibers. A short colored film of asbestos mining operations in the town of Asbestos, Quebec, Canada, will be shown. This film will be of great interest to all of the guests as it will show in detail this unique mining operation. Mr. Nelson will devote the rest of the meeting to showing some of the materials containing asbestos fibers, also new synthetic plastics and resins using very small particles of asbestos fibers to insure strength and rigidity. This meeting will be of great interest to all of the participating guests and members.

USE QUALITY PRODUCTS — MANUFACTURERS OF QUALITY BUILDING PRODUCTS — THE PRODUCERS' COUNCIL — CONSULT AN ARCHITECT

SCHOOL FUNDS ALLOCATED

The State of California, Division of Architecture, has announced the allocation of some $654,000 in constructions funds to be used in building a gymnasium and athletic field for the California School for the Deaf in Berkeley.

Work on the project is to commence in the near future. Details are in charge of Anson Boyd, State Architect, Sacramento.

WEYERHAEUSER JOINS RED CEDAR ASSOCIATION

R. M. Ingram, president of the Western Red Cedar Lumber Association, announced the inclusion of the Weyerhaeuser Timber Company as a new member at a Board of Trustees meeting in Seattle, Washington.

The Association now has sixteen members and represents nearly 100 per cent of the manufacturers of dry Western Red Cedar siding in North America, including British Columbia.

Offices of the newly formed group are maintained in Seattle.

HUTCHINSON NAMED PRODUCT SALES MANAGER

R. W. Hutchinson has been appointed product sales manager for the Federal Pacific Electric Company, according to an announcement by A. A. Browne, vice president of the firm.

He will supervise the promotion and execution of the division's sales policies and will maintain offices in San Francisco, western headquarters of the company.

ARCHITECT SELECTED

The architectural firm of Mayo, Johnson & DeWolf of Stockton has been commissioned by the Stockton Unified School District to draft plans for construction of two new Junior High School buildings to be built in the city of Stockton.

The two new units will serve recently developed areas of the city and will cost an estimated $1,045,000 each.

COMMUNITY HOSPITAL

The architectural firm of Stone & Mulloy & Marraccini & Patterson of San Francisco, has been selected by the Dominican Sisters to design a new Community Hospital to be built in Hayward.

Funds for the project are being solicited and when available will go towards construction of 98-bed modern hospital, estimated to cost $2,700,000.

SUPER MARKET

Architect Bruce E. Heiser of San Francisco is working on preliminary drawings for construction of a new Super-market to be built in Belmont at an estimated cost of $250,000, and a Super-market to be built in Redwood City at an estimated cost of $250,000.

Both structures will be of one-story reinforced concrete construction.

RALPH JOHNSON APPOINTED NAHB CONSTRUCTION..CHIEF

Ralph J. Johnson has joined the National Association of Home Builders as Director of the Construction Department and the Research Institute, according to an announcement by John M. Dickerman, Executive Director. He was formerly Chief of Housing Hygiene Activities for the U. S. Public Health Service.

Johnson has been in the housing field for the last ten years.

C. W. KRAFT SPEAKER

Chas. W. Kraft, president of the Kraftile Company, was the principal speaker at a recent meeting of the Building Industry Conference Board at the Sheraton-Palace Hotel in San Francisco.

Kraft, given national recognition when he received the American Standards Association Modular Service Award for 1954, talked on "Modular Coordination in Construction Design."

"In addition to gaining a sales point in faster service, a manufacturer of construction materials and equipment can count on lower costs through simplification and standardization by using the modular method," Kraft declared.

J. A. Carlson, Producers' Council representative on the Board, presided.

NEW JUNIOR HIGH SCHOOL

Architect G. N. Hilburn of Modesto is working on drawings for the construction of a new Junior High School to be built in Modesto for the Modesto Unified School District.

The new buildings will include facilities for administration, classrooms, science room, home-making, shower and locker rooms, shops, and toilets and will cost an estimated $375,000.

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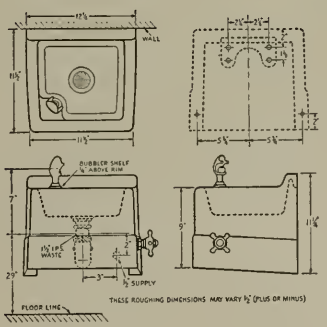

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(From Page 21)

the expansive wall of brick or stone around fireplaces where the masonry installation is intended to form one entire wall in the room of a home. They install a television set in the largest area of blank wall space, leaving a grille work in the brick above for either radio or television speaker. This arrangement solves many a perplexing problem of how to see television and still group around the fireplace facing the fire. It also takes the bulky television set out of the realm of nightmares when the homemaker is trying to arrange her casual furniture and include an outsize television set. Access to the set is made through small doors in the rear of the fireplace, if this is possible, otherwise provision should be made for direct frontal removal in case of repairs. Remote operation is easily arranged.

For the late night viewer with his favorite programs which come on after he has retired, some architects have designed clever space juggling methods for including television in the bedroom decor without taking any floor space. The simple solution is to install the set in the wall, flush with the wall surface. This is easy if it can be placed beside an area adjoining closet space where depth can be achieved. How to hide the set? Some clever people use a picture, hinged to the wall so it can be opened away like a door. Other designers have set the television right in the middle of a series of builtin wardrobe doors.

One of the most interesting and effective devices to hide the television set is to build a custom-designed room divider which can easily be made deep enough to house the set and at the same time provide ample cabinet storage for records and other music paraphernalia. Cabinet doors to mask the set can be as elaborate or simple as taste dictates.

The way some designers have concealed the bulky and sometimes hard-to-manage television set from view, it would appear to be the unwanted stepchild. Where depth can be gained, some television sets have been installed directly into paneled walls, with only the control knobs and viewing screen visible, with a modest speaker screen almost concealed near the floor. In these cases, the set is generally centered in a wall panel, and for those who desire, special decorative collars can be added.

Television in the child's room is no longer a luxury, for now that the novelty of this entertainment media has worn off, the adults must have some relief from cowboy and child's soap opera productions. Obviously the quick solution is to install a small set in the child's room, or in a room in the end of the home nearest the children's bedrooms. It is generally rather easy to arrange for wall storage for the set in the child's room because of available depth next to closet areas. A cabinet to house the set can be erected next to the closet, or even in one corner of the closet.

More and more common is the television wall installation which permits swivelling the set so that it may be seen in either of two adjoining rooms. This is especially handy in a home where there are children. The set can be installed so that it can be viewed by those in the living room and when children programs are on, or guests are on hand who would be annoyed, the set can be turned around in the wall and viewed by children or others in the adjoining room.

In a good many homes, television has been responsible for the creation of an entirely new type room, which is a cross between a dining room and a music studio. Dining table is designed along one wall of the room and the television set is installed in varying degrees of beauty in the opposite wall. The dining table in many instances is a long table with all seating against the wall. Here the family can enjoy the dinner-time shows without interrupting their dining. Remote control permits those at table to change programs without leaving the dinner table.

The audio walls, or music walls, or architectural walls with built in music offer another great challenge to western designers and architects for it is now almost cretain that the home of the future must give consideration to this new emphasis on home entertainment. A new way of American living is having a terrific impact on home design.

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Whittemore Strain Gauge Tests Prove: BASALITE Expanded Shale Masonry Units have ONLY 0.05%* MAXIMUM SHRINKAGE (saturated to dry)

*Corps of Engineers' requirement is 0.05% shrinkage. National Bureau of Standards require 0.05% shrinkage.

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"ENGINEER AND WELFARE"

(From Page 22)

sonnel in numbers compatible with our world position as a first-class power.

We shall not again be favored with the chance to extemporize (such as we were favored with during the early 'forties), a chance to extemporize in the converting of our natural resources, both raw materials and human personnel, into an organism of national protection.

Our country has immediate need for engineers.

Engineers for the President's $100 billion highway program.

Engineers for industry, which last year asked for double the total number of those graduating.

Engineers for our country's huge earth-moving program.

Engineers for our new electronics and nuclear undertakings.

Engineers for our new and coming urban heliports.

Engineers for the private and public research projects.

Engineers for entering the private consulting field.

Engineers for the building up of the construction industry.

This last is our largest single industrial activity today; it represents 1/7 of our total national income and at this hour can absorb half the full number of our new engineering graduates.

Your part in all this?.Clearly, gentlemen, your part is to encourage strong and talented young people to enter this field. High school or sooner is the desirable starting time.

You may correctly promise any such individual having the right qualifications that he will derive a training therefrom which will, more than any other single intellectual pursuit, prepare him for a great number of effective activities besides engineering—executive and managerial positions, just to give you one example.

You can properly give as your reason for this universal applicability of the engineer-trained mind, and I quote from a recent address by H. P. Cooper, Engineering Department, Dow Chemical Co., "that it develops in the person a routine for logical thinking and a systematic method for attacking and working with a problem until the correct solution can be found."

Such an aspirant must of course be proficient in mathematics and his chances of succeeding will be much better if he also possesses the qualities of independence of thought, ingenuity, accuracy and endurance.

Our part in all this? Ours, as engineers, is plainly to conduct our affairs and to consider our written and

(See Page 35)

PICTURE CREDITS: Moulin Studios, Cover, Page 8, 9, 10, 12, 13, 15; Photo-Art Commercial Studios, Page 16, 17, 18, 19, 20, 21; General Concrete Products, Page 25.

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PERSONALITIES

TENNYS FRANCIS BELLAMY
Architect

Seattle, Washington

Tennys Francis Bellamy was born in Troy, Idaho, two years before the Alaska Yukon World's Fair held in Seattle. His parents moved to Seattle at the time of the Exposition and he has resided there since.

TENNYS FRANCIS BELLAMY — Architect

He attended public schools in Seattle, and graduated from the University of Washington with a degree in architecture in 1928; received a further degree from the Yale University School of Architecture in 1930; and received his license to practice architecture in the State of Washington in 1934.

Between graduation from Yale and start of private architectural practice, Tennys worked as an architectural designer in architectural offices in Boston, New Haven, New York, Chicago, Yakima, Olympia and Seattle, participating in the designing of the Chicago World's Fair, the New York Hospital, Cornell Medical Center in New York, Marshall Field's Interior Decorating Studio, and work for Howard Hughes of Los Angeles. He has designed large and small residences, Christian Science churches, warehouses, stores, gas and tire service stations, shopping centers, apartment houses, auto courts, food processing plants, office building and hospitals and mausoleums.

In the design field, Bellamy is particularly interested in the study of traffic in respect to both automobiles and pedestrians, and has spent twelve years studying operations of the Standard Service Tire Company of Seattle. He believes that "a successful enterprise must have a background of efficient and functional treatment."

Bellamy and wife Katherine reside in a home he designed in the Blue Ridge section of Seattle, with a view that overlooks Puget Sound and the magnificent Olympic Mountains.

JOHN GOULDING LITTLE, ENGINEER

John Goulding Little, prominent California Civil and Structural Engineer, died of a heart attack while attending a recent meeting of the Earthquake Engineering Research Institute.

Chief Engineer for the San Francisco City Architect's office; design engineer for the California State Board of Harbor Commissioners; consulting engineer for the City of San Francisco; superintendent of the City of San Francisco building inspection bureau; consulting engineer for the Golden Gate Bridge & Highway District; and consultant in seismology for the U.S. Coast & Geodetic Survey, Little was the engineer on more than five hundred buildings, bridges, docks, railroads, highways and other outstanding projects.

He was active in the Northern California Structural Engineers Association.

AMERICAN SOCIETY OF CIVIL ENGINEERS —S.F. Section

A glimpse of the future San Francisco highways was given by Joseph P. Sinclair, District Engineer 4, California Division of Highways, at the April meeting.

Sinclair, in charge of planning and design of highways in the City and County of San Francisco, chose as his subject "San Francisco Skyways."

ARCHITECTS SEE DEMONSTRATION OF WEBERWALL

More than 400 architects, members of Northern California's American Institute of Architects Chapters, and guests attended a demonstration at the Mark Hopkins Hotel, San Francisco, early this month to view a demonstration and discussion of Weber Show-

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case & Fixture Co., Inc., building products.

"Company executives and the architects who plan their office buildings have found that even a genius isn't worth but a fraction of his salary when assigned to work in a badly lighted, poorly ventilated, noisy bull-pen, and through no fault of his own," declared Edward O. Stevenson, general manager of the Weber fixtures division.

The event was designed to acquaint Bay Area architects with the possibilities inherent in Weber's new product line for use in office buildings, commercial structures, retail stores, and schools and colleges. One of the evening's features was a showing of the motion picture "Walls of Steel," highlighted by the personal appearance of Claire Weekes, starlet featured in the film.

"ENGINEER AND WELFARE"

(From Page 33)

verbal utterances all in a manner that will dignify that magnificent profession and help elevate it to a position high in the public esteem, for all to see, that it may serve to attract those much needed young and worthy recruits.

Allow me to re-define the term thus:

The engineer devises the efficient use of those impersonal materials: steel, plastics, timber, the elements, concrete, metallics, masonry, earth and water. In doing so, he shapes matter whose integrity is in no way susceptible to the influence of psychiatry, legal process, medication or financial pressure.

He is thus required to honor the many immutable laws of nature, which bow neither to trickery nor to manipulation — laws that school him in a habit of straightforwardness which makes him and his profession stand proudly alongside the others as a most necessary part of his community.

NEWS AND COMMENT ON ART

(From Page 5)

Mediterranean; Recent Paintings by Joseph A. Oneto; Sculpture by Frances Rich and Drawings by Jeannette Maxfield Lewis.

The Achenbach Foundation for Graphic Arts, at the museum, is offering a Retrospective Exhibition of the work of Ernest Haskell. The Loan Exhibition at the San Francisco Public Library is featuring Wit and Humor; also included in this exhibition are books on the same subject from the Schmulowitz collection.

SPECIAL EVENTS included an Easter Concert, Sunday, April 10th, at 3 p.m.; the Organ Program every Saturday and Sunday at 3:30 p.m.; Motion Picture Series, Saturdays; and the Educational Activities of Art Classes for Children, Saturday mornings at 10.

CALIFORNIA WATER COLOR EXHIBITION AT deYOUNG

Twenty-five selected paintings from the 34th Annual Exhibition of the California Water Color Society will be shown at the M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, during April.

The works selected for travel represent the best among various current tendencies of painting within a wide range of watercolor media and were chosen from 106 works in the original exhibition, which opened at the Fine Arts Gallery in San Diego.

Among the exhibitors whose paintings are being shown is one Bay Area artist, Maurice Logan. The ten prize winners represented in the traveling show consist of Roger Barr, Edward Betts, T. John Christo, Jules Engel, Ynez Johnston, Douglas McClellan, Patricia Morris, Richard Ruben and Delmar Yoakum. Also included are works by Paul Darrow, Leonard Edmondson, Edgar Ewing, Ejner Hansen, Harold Kramer, John Kwok, John Leeper, Dan Lutz, John B. Miller, William Munson, Darwin Musselman, Aubrey J. R. Penney, Jonathon Scott and Phyllis H. Skelton.

KOREAN CHILDREN'S EXHIBIT AT deYOUNG

Korean children's drawings will be on exhibit at the M. H. deYoung Memorial Museum through April.

Fifty-four drawings by children between the ages

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of 6 and 11 were selected for travel from a nationwide elementary school competition sponsored by the Korean Ministry of Education and the Asia Foundation, with prizes awarded by the Asia Foundattion as a part of its program to encourage cultural activities.

The exhibit was previously shown in Korea and Japan and is on view for the first time in this country.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, announces the following special exhibitions and events for April:

EXHIBITIONS: Water Colors and Prints by Pierre-Joseph Redoute (1759-1840); California Water Color Society, selected paintings from the 34th annual exhibition; Oils by Edgar Ewing; The Nathan Cummings Collection of Pre-Colombian Peruvian Ceramics; 19th and 20th Century French Paintings; Korean Children's Drawings, The Modern Movement in Italy, a special exhibition of architecture and design.

SPECIAL EVENTS: Classes in Art Enjoyment for Adults include special Sunday afternoon lectures; Art and Ideas—a study of the changing picture of reality, a course in the history of art dealing with principal changes in painting styles as these relate to fundamental changes in belief, given Wednesday afternoons and Saturday mornings; Seminars in the History of Art, informal discussions illustrated by lantern slides, reproductions and original works, Thursday mornings; the Painting Workshop for Amateurs, painting from the model and still life; and for Children, classes in Picture Making, Art and Nature and the Art Club.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has scheduled the following exhibitions and events for April:

EXHIBITIONS: 74th Annual Painting and Sculpture Exhibition of the San Francisco Art Association; a special exhibit, Art In America, influences and originality in painting in Latin America and the United States, in honor of Pan American Week; California Architecture, an exhibit organized by the Northern California Chapter of The American Institute of Architects; the Neuberger Collection, Israeli Printmakers, and the usual museum collections.

SPECIAL EVENTS include concerts, poetry reading, lecture tours—each Sunday afternoon at 3 o'clock, Discussions in Art—Wednesdays at 8:30 p.m., Lecture Film Series and Classes in Art—the Sketch Club and Painting Class each Friday at 7:30 p.m., and the Children's Class each Saturday morning at 10 o'clock.

DECORATIVE STONE

(From Page 25)

struction Company and the Shaw Construction Company in planning this modern residential area utilized General Concrete Product's five available colors separately or combined to create distinctive effects.

In several La Mirada homes Artcraft Stones, masonry contractors, contributed dramatic touches by heightening shadows and making random ashlar patterns. These methods of varying color and mortar are continually establishing their acceptance in home construction and remodeling.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

ANALYSIS OF STATICALLY INDETERMINATE STRUCTURES. By John I. Parcel and Robert B. B. Moorman. John Wiley & Sons, 440 4th Ave., New York 16. Price $9.50.

In the first half of the book the reader will find a more complete presentation of the basic theory of deflections and statically indeterminate structures than is available in any other work in the English language. Its treatment of the various methods of attack is fully supplemented by numerical examples.

The remainder of the study offers practical, authoritative coverage of the problems facing structural engineers. Special attention is given to the solution of numerical examples by a wide variety of methods. Design office procedures are used in solving problems in continuous girders, frames, arches, secondary stresses, and suspension bridges.

The book contains data on an important new method of distribution in which sidesway takes place automatically, as joints are balanced in the normal rotation process. In addition, there is a unique treatment of frames which provides an extension of the slope-deflection equation to frames with curved members. This method greatly simplifies the analysis of multiple-arch bridges on elastic piers and similar problems. Extensive table are given to facilitate application.

PROFESSIONAL ENGINEERING REGISTRATION LAWS. By Alfred L. McCawley. National Society of Professional Engineers, 1121 15th St. N. W., Washington 5, D. C. Price $8.75.

The author, an attorney and former Missouri State Senator, presents a compendium of registration laws for professional engineers in the 48 states, Alaska, Hawaii, Puerto Rico, and District of Columbia.

The 614-page book is the culmination of an extensive research project undertaken by McCawley under the sponsorship of the National Society of Professional Engineers. A valuable addition to any engineer's library.

RESIDENTIAL WIRING HANDBOOK. A Guide To Electrical Planning For New And Modernized Homes. Edison Electric Institute, 420 Lexington Ave., New York. Price 25 cents.

Completely revised, this book supersedes the 1946 edition, and raises the standard for wiring adequacy to a min mum of 100 amperes for service entrance capacity in all residential housing of 3,000 sq. ft. of floor area or less; individual equipment circuits, at least one 3-wire general appliance circuit appears as a standard, and 3-wire branch circuits with split-wired receptacles are recommended for living room and bedrooms.

Changes in design of today's new homes and in living habits of buyers are reflected in new standards. Wiring design standards for one-story, open floor plan house and two-story or multiple-family dwellings are given.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Systems for suspended ceilings. Four systems for suspended ceilings are intelligibly illustrated and described in a new catalog NSP-7 (A.I.A. File No 39-B-1); planned to provide information architects and engineers need most in designing suspended ceilings; contains dimensional drawings, perspective drawings and installation photographs; also includes details on utility nailing channels for light suspended ceilings. Write DEPT, A&E, The Sanymetal Products Co, Inc, 1701 Urbana Rd., Cleveland 12, Ohio.

Metal lath membrane. Technical Bulletin No. 3, just revised and released, contains complete information on metal lath membrane fireproofing for steel structures; gives description of metal lath membrane fireproofing and the material involved, together with numerous details, and fire resistive ratings for columns, beams, girders, trusses and floor and roof deck as-

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semblies. Write for copy DEPT-A&E, Metal Lath Mfgrs Ass'n, Engineers Bldg, Cleveland, Ohio.

Toilet compartments. New 28-page, illustrated in the actual colors, catalog (A.I.A. File No. 35-H-6) on toilet compartments; contains engineering drawings, itemized descriptions and complete specifications for architects and engineers; a guide to the wide selection of materials and finishes available in both flush, and panel type compartments, as well as compartment styles; total of 22 basic colors and tones are offered. Write DEPT-A&E, The Sanymetal Products Co, Inc, 1701 Urbana Rd., Cleveland 12, Ohio.

Stud welding of anchors. A 6-page folder detailing methods for the stud welding of standard concrete anchors for curbing, column guards, protective platform installations, door frames and other fabricated architectural components as well as for bridge expansion dams and other structural applications; detrailed drawings of more than 20 different applications and information for shop or field use. Free copy. Write DEPT-A&E, Nelson Stud Welding Division, Gregory Industries, Inc., Lorain, Ohio.

Automatic door controls. A new 8-page catalog (A.I.A. File No. 27-B), defines, illustrates and describes in detail the four Invisible Dor-Man automatic door controls and twenty-five manual control models. Write DEPT A&E, Dor-O-Matic Division, Republic Industries, Inc, 4446 No. Knox Ave, Chicago 30, Ill.

Precision engineerd lens. Amcolenses, precision engineered lens for lighting equipment are featured in this new 60-page catalog, designed for the guidance of the architectural and engineering professions in the selection and evaluation of unified lighting. Nine different styles in a range of 8 popular sizes showing crystal clarity, undiminished light transmission efficiency, unaltered light distribution, minimum brightness in glare zone, edge-light on ceiling for contrast relief, soft, warm illumination are explained. Free copy write DEPT-A&E, Art Metal Co., Cleveland 3, Ohio.

List of American Standards. 1955 edition, 48-page booklet contains lists and indexes about 1,500 American Standards; 210 for construction and civil engineering; 153 mechanical; 272 electrical; 158 safety; 165 textiles and wearing apparel; 251 photography and motion pictures; 74 petroleum products; 69 chemical; 62 metallurgy; 38 gas burning appliances; 32 drawings, letter symbols and abbreviations; 18 mining; 11 rubber; 10 office equipment and supplies; and a miscellany of others. Free copy write DEPT-A&E, American Standard Ass'n, 70 E. 45th St., New York 17.

Masonry chimney. A new 8-page, 2-color booklet, gives complete up-to-the-minute information on masonry chimney; details product information, applications, specifications, and installation procedures; also data on advantages of new and existing construction, and test data. For complete data write DEPT-A&E, Van Packer Corpn, Bettendorf, Iowa.

Sheaves and tracks. Four-page, 2-color, folder (A.I.A. File No. 27) on sheave and track line for sliding doors, partitions, walls, and store fixture applications; gives specifications and illustrations of installations; also cut-aways. Free copy available write DEPT-A&E, Grant Pully & Hardware Corpn, 31-85 Whitestone Parkway, Flushing 54, N. Y.

Manlift elevators. New, 2-color, folder, illustrates and describes four standard models of the Humphry Manlift Elevators; power driven, continuous belt type with hand holds and steps at proper intervals to provide simultaneous up and down employee transportation with no waiting or delay; for multi-floor use where there is vertical processing of product and where frequent, quick inspection or servicing of machinery on various floor levels is required; installed in new or existing buildings; many photographs of installation; also data on safety features required to comply with varying state codes and laws. Free copy write DEPT-A&E, Humphry Elevator Company, Inc., Faribault, Minn.

Metal items for stairways and walkways. Architectural metal items for stairways and walkways, including stair treads and thresholds in abrasive surfaced cast metal of iron, aluminium and bronze, are illustrated and described in new catalog by Wooster. Drawings of installations, products, specifications. Free copy write DEPT-A&E, Wooster Products, Inc., Wooster, Ohio.

ESTIMATOR'S GUIDE

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All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

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Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
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Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
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2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00.
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8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00
Hollow Tile—	
12x12x2-inches, per M	$146.75
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12x12x6-inches, per M	235.30

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Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

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	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl.	3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.	
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Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.	

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6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.62

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¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ¼-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $1.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	¾x2¼	½x2	¾x2	1"x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390 00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/16 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/16 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/16 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/16 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—

Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. t x 4 T & G Flooring	$225 00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square. $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Selt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, oer lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Besis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis. 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	Pr. per pkg.	Price to Painters per 100 lbs.	Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$ ....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply. ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square. $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless. (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x 7/8-inch, plain	$ .40	$ .36
6 x 12 x 7/8-inch, plain	.44	.39
6 x 6 x 7/8-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00

Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plent

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS I*(38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS I*(38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 7-1600

IRON—Ornamental (18)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Posadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERNAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

GARAGE, San Francisco. S. Onorato, San Francisco, owner. Three story, with basement, reinforced concrete construction —$185,000. STRUCTURAL ENGINEER: H. C. Vensano, San Francisco. GENERAL CONTRACTOR: Cahill Bros., San Francisco.

OFFICE & WAREHOUSE, Palo Alto, Santa Clara county. Houghton Mifflen Co., San Francisco, owner. One story frame and stucco construction; warehouse, one story 20,000 sq. ft. in area, reinforced concrete tilt-up construction — $150,000. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

ELEMENTARY SCHOOL, Soledad. Monterey county. Soledad Union Elementary School District, Soledad, owner. Frame and stucco and brick veneer construction; 16 classrooms, administration room, kitchen, multi-purpose room, toilets —$409,192. ARCHITECT: Cline & Zerkle, Soledad. GENERAL CONTRACTOR: Tombelson & Huck, Salinas.

PROFESSIONAL BLDG., San Jose, Santa Clara county. Colonial Company, San Jose, owner. Two story frame and stucco construction, some stone veneer; 8000 sq. ft. in area; 10 suites of offices—$90,400. ARCHITECT: Gross & Marburg, San Jose. GENERAL CONTRACTOR: E. A. Hathaway, San Jose.

MORTUARY, Reno, Nevada. Walton Funeral Home, Reno, owner. One story, fireproof construction; 35x85 ft. ARCHITECT: Milford Wheeler and Robert C. Gray, Reno. GENERAL CONTRACTOR: Weil Constn Co., Reno.

BANK BLDG., Mt. View, Santa Clara county. First Western Bank & Trust of San Francisco, owner. One story, with mezzanine, reinforced concrete construction, brick front, drive-in window—$136,713. GENERAL CONTRACTOR: Larsen & Son, San Francisco.

WAREHOUSE & OFFICE, San Francisco. Wilson & Co., owner. One story, reinforced concrete tilt-up construction, wood roof — $205,000. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: M & K. Corpn, San Francisco.

PUBLIC HEALTH BLDG., Berkeley, Alameda county. City of Berkeley, owner. Two story, structural steel, concrete block walls, concrete floors, open web ceilings—$137,150. ARCHITECT: Michael Goodman, Berkeley. GENERAL CONTRACTOR: Greuner Constn Co., Oakland.

PAROCHIAL SCHOOL, Oroville, Butte

county. Roman Catholic Diocese of Sacramento, owner. Frame and stucco construction; 8 classrooms, administration room, toilet rooms — $174,000. ARCHITECT: Clarence C. Cuff, Sacramento. GENERAL CONTRACTOR: Riverman & Sons, Central Valley, California.

CHURCH, South San Francisco, San Mateo county. Our Redeemer's Lutheran Church, owner. Frame and stucco—$75,000. ARCHITECT: Alfred W. Johnson, San Francisco. GENERAL CONTRACTOR: Central California Constn Co., San Francisco.

WAREHOUSE & OFFICE, Alhambra, Los Angeles county. William J. Moran Co., Alhambra, owner. 1-Story, reinforced concrete, warehouse and office building, composition roofing, tapered steel beams, steel projecting and louvered sash, overhead doors, concrete slab floors partly covered with asphalt tile, interior plaster, acoustical tile ceilings, suspended gas heaters, gas water heater, toilets, pipe columns; 97x163 ft. ENGINEER: E. M. Bennetsen.

CONTRACTOR: George W. Carter Co., Los Angeles.

BRANCH BANK, Hunter Square, Stockton, San Joaquin county. Bank of America, San Francisco, owner. Remodel of interior and exterior—$179,625. ARCHITECT: Capitol Company, San Francisco. GENERAL CONTRACTOR: Nomellini Constn Co., Stockton.

PHYSICAL EDUCATION BLDG., Junior College, San Jose, Santa Clara county. San Jose Unified School District, San Jose, owner. Frame and stucco physical education building on the Junior College campus —$359,414. ARCHITECT: Kress, Goudie & Kress, San Jose. GENERAL CONTRACTOR: Nielsen & Neilsen, San Jose.

CHURCH SCHOOLS., Eagle Rock, Los Angeles county. Lutheran Church of the Good Shepherd, Los Angeles, owner. 1-Story frame and stucco school addition, composition roofing, plumbing, heating, electrical work, asphalt tile floor covering, acoustical tile, curtain partitions, steel sash, brick fireplace, metal gutters, kitchen radiant heating; 100x46 ft. and 24x42 ft., ARCHITECTS: Smith, Powell & Morgridge, Los Angeles. GENERAL CONTRACTOR: Samuelson Bros., Glendale.

MARKET BLDG., Van Nuys, Los Angeles county. E. C. Gise, Los Angeles, owner. 1-Story brick market building, composition and gravel roofing, concrete floor, asphalt tile floor covering, interior plaster work, gas water heater, acoustic tile ceiling, toilets and locker rooms, cooler and freezer rooms, mezzanine, steel pipe columns, tapered steel girders, stone ve-

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	43.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.75
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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neer, aluminum casement, asphalt concrete paving; 200x200 ft. ARCHITECT: Stiles and Robert Clements, Architect & Engineers, Los Angeles. GENERAL CONTRACTOR: Wohl-Calhoun Co., Los Angeles.

ARMORY TYPE "A," Monterey. State of California, Sacramento, owner. Reinforced concrete footings, concrete floors, concrete walls, rigid steel frame, steel sash, wood roof with composition roofing, mechanical and electrical work; 11,000 sq. ft. floor area — $96,743. ARCHITECT: Anson Boyd, California State Architect, Sacramento. GENERAL CONTRACTOR: F. V. Hampshire, Salinas.

STORE, San Jose, Santa Clara county. Dick Yee, San Jose, owner. 1-Story concrete block, wood roof; 13,500 sq. ft. floor area separated into seven stores — $100,000. ARCHITECT: Wallace J. Alexander, Sacramento. GENERAL CONTRACTOR: Edwards Case Co., North Sacramento.

HOTEL MARDI GRAS, Las Vegas, Neveda, Ray Giorgi, Los Altos, California, owner. 5-Story, 349 room hotel. Plans for Casino by ARCHITECT: Zick & Sharp, Las Vegas. GENERAL CONTRACTOR: Merril Constn Co., Las Vegas.

OFFICE BLDG., Oakland, Alameda county. East Bay Municipal Utility District, Oakland, owner. 2-Story reinforced concrete, aluminum sash, air conditioning, composition flooring; 45,000 sq. ft. floor area — $761,293. ARCHITECT: Michael Goodman, Berkeley; STRUCTURAL ENGINEER: Clyde Bently, San Francisco. GENERAL CONTRACTOR: John E. Branagh & Son, Piedmont.

ELEMENTARY SCHOOL, Phoenix, Arizona. Maricopa County Board of Supervisors, Phoenix, owner. New elementary school and additions to the Griffith School — $229,677. GENERAL CONTRACTOR: Harold Kraemer, Phoenix.

ALTERATIONS, Laguna Honda Home, San Francisco. City and County of San Francisco, owner. Alterations to the kitchen, bakery and commissary of the Laguna Honda Home for the aged — $270,869. ARCHITECT: Charles W. Griffiths, San Francisco. GENERAL CONTRACTOR: Beacon Constn Co., San Francisco.

CHURCH, Santa Rosa, Sonoma county. Bethlehem Luthern Church, Santa Rosa, owner. Frame and stucco construction — $83,798. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: Robert R. Todd, Santa Rosa.

CITY HALL, San Pablo, Contra Costa county. City of San Pablo, San Pablo, owner. Remodel from old market building; interior and exterior, asphalt tile floors, reinforced concrete jail, steel jail equipment — $128,620. ARCHITECT: Barbachano. Ivanitsky & Watanabe, El Cerrito.
GENERAL CONTRACTOR: Carl Overaa Co., Richmond.

BANK, San Fernando, Los Angeles county. Pacific Southwest Realty Co., Los Angeles, owner. 1-Story, reinforced concrete, composition roofing, concrete and asphalt tile floor covering, metal sash, heating, ventilating, painting, electrical work, sheet metal work, structural and miscellaneous metal, acoustical work; 140x60 ft. ARCHITECT: Lunden, Hayward & O'Connor, Los Angeles. GENERAL CONTRACTOR: C. E. De Witt, San Fernando.

CHAPEL BLDG., Berkeley, Alameda county. Pacific School of Religion, Berkeley, owner. Reinforced concrete and frame construction — $226,000. ARCHITECT: Smith, Powell & Morgridge, Los Angeles. GENERAL CONTRACTOR: Dinwiddie Constn Co., San Francisco.

CELLAR BLDG., San Francisco. Hamm Brewing Company, San Francisco, owner. 2-Story stock cellar building with provision for later addition of four more floors; structural steel frame, reinforced concrete; 110x110 ft. — $320,000. ARCHITECT: Meyer & Evers, San Francisco. GENERAL CONTRACTOR: Cahill Bros., San Francisco.

MOTEL, San Francisco. Ji, Hamm, San Francisco, owner. 2-Story frame and stucco construction — $100,000. ARCHITECT: H. C. Baumann, San Francisco. GENERAL CONTRACTOR: Louis Franceshi, San Francisco.

GUEST HOUSE, San Marino, Los Angeles county. Mr. & Mrs. Everett L. Harris, Los Angeles, owner. 2-Bedroom, frame and stucco guest house, shake roofing, wood floors, wall heaters, dark room with sink, two ¾ baths with stall showers. ARCHITECT: Scott Quintin, Alhambra. GENERAL CONTRACTOR: A. E. Barber, Temple City.

FRATERNAL HALL, Hanford, Kings county. Hanford Fraternal Association, Hanford, owner. 1-Story, steel bents, concrete slab floors, wood stud partitions, plaster exterior, plywood interiors, composition roofing, forced warm air heating; main hall area, kitchen, officers; 8,400 sq. ft. of floor area—$71,385. ARCHITECT: Horn & Mortlan, Fresno. GENERAL CONTRACTOR: Ellberg & Conklin, Kingsburg.

COFFEE PLANT AND OFFICES, San Francisco. S & W Fine Foods, San Francisco, owner. 1-Story coffee plant, reinforced concrete construction, 250,000 sq. ft. floor area; 2-Story office containing 36,000 sq. ft. floor area — $1,387,653. ARCHITECT: Albert F. Roller, San Francisco. GENERAL CONTRACTOR: Cahill Bros., San Francisco.

GYMNASIUM, High School. Berkeley, Alameda county. Berkeley Unified School District, Berkeley, owner. Reinforced concrete and structural steel construction—$382,750. ARCHITECT: Masten & Hurd, San Francisco. GENERAL CONTRACTOR: Joseph Bettancourt, San Bruno.

CHURCH REMODEL, St. Anselmo Parish, San Anselmo, Marin county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. Construction of a frame and stucco addition and remodel the present Church — $43,700. ARCHITECT: Smith & Minton, San Francisco. GENERAL CONTRACTOR: John A. Rademann, San Francisco.

HOTEL ADD'N, Casa Munras Hotel, Monterey. Casa Munras Hotel, Monterey, owner. Construction of a one and two-story concrete block and frame, with adobe veneer, addition; providing facilities for 20 units, baths, offices and barber shop—$119,942. ARCHITECT: Robert R. Jones, Carmel. GENERAL CONTRACTOR: Jos. B. Fratessa, Monterey.

CAN FACTORY, San Leandro, Alameda county. Sherwin-Williams Co., Emeryville, owner. 1-Story reinforced concrete construction with steel sash; 75,000 sq. ft. floor area. ARCHITECT: Albert Hunter, Jr., Berkeley. GENERAL CONTRACTOR: R. C. Lewis Constn Co., Oakland.

AIRPORT ADMINISTRATION BLDG, Municipal airport, Sacramento. City of Sacramento, Sacramento, owner. 1-Story, part basement; 4-story aircraft control tower; frame and stucco; 22,000 sq. ft.

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floor area — $422,388. ARCHITECT: Leonard F. Starks, Sacramento. GENERAL CONTRACTOR: Edwin J. Mackey, Sacramento.

RICKEY'S STUDIO INN ADD'N, Palo Alto, Santa Clara county. Rickey's Palo Alto, owner. 1-Story wood siding and batten construction; shake roof; facilities for 48-suites and baths — $350,00. ARCHITECT: Ernest J. Kump, San Francisco. GENERAL CONTRACTOR: Barrett Constn Co., San Francisco.

BANK, Huntington Park, Los Angeles county. Security First National Bank, Los Angeles, owner. Composition roofing, diagonal wood roof sheathing, mezzanine, air-conditioning, steel sash, tapered steel girders, acoustic tile, plate glass, toilet rooms with ceramic tile, fluorescent lighting, parking area; 110x62 feet. ARCHITECT: Larsen Associates, Van Nuys. GENERAL CONTRACTOR: Oltmans Constn Co., Monterey Park.

IN THE NEWS

KILLINGER ELECTED TESTING PRESIDENT

Frank R. Killinger of A. J. Hales & Company, Inc., of Oakland, was elected president of the Association of California Testing and Inspection Laboratories for 1955-56, at the association's annual meeting recently held in the Huntington-Sheraton Hotel in Pasadena.

Killinger succeeds Harrison H. McCall, president of the Los Angeles Testing Laboratory.

Other officers chosen included Raymond G. Osborne, Jr., Raymond G. Osborne Laboratories, Los Angeles, vice-president; J. Howard Dunn of Hersey Inspection Bureau, Oakland, secretary-treasurer; and directors Edward M. Twining, Twining Laboratories of Fresno, Myron B. Niesley of California Testing Laboratories, Los Angeles.

GYMNASIUM BUILDING

Architects Masten & Hurd of San Francisco are completing plans for construction of a new gymnasium building as part of the Garfield Junior High School in Berkeley.

The new unit will be of reinforced concrete and steel construction and will cost an estimated $374,000.

OAKLAND OFFICE BUILDING

Plans are underway for construction of a new 2-story reinforced concrete office building in Oakland for the East Bay Municipal Utility District.

The new central offices wil contain 45,000 sq. ft. of floor space, will have aluminum sash, air conditioning and composition flooring.

Architect Michael Goodman of Berkeley is developing the plans in conjunction with Hall, Pregnolff and Mathou, structural engineers, and Clyde Bently, mechanical engineer.

Estimated cost of the building is $700,000.

COUNTY JAIL ADDITION

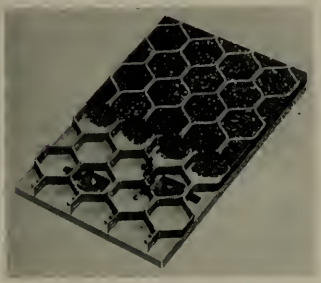
The architectural firm of Butner, Holm & Waterman of Salinas is completing plans for construction of an addition to the County Court House in Salinas to be used as a County Jail.

The new structure will be of reinforced concrete construction, will have elevators and all modern facilities.

Estimated cost is $150,000.

NEW SAFETY FLOOR ARMOR

Announcement of a new safety floor armor that has less weight per square foot and a greater exposed steel surface has been made by the Klemp Metal Grating Corpn of Chicago.



Designed for abnormal wear and rough usage, and economical to install; can be used for resurfacing concrete or wood floors. The exposed steel surface armor is 18.15 square inches per square foot, and the weight is 1.7 pounds per square foot. Ideal for ramps, garages, factory aisles, parking areas, runways, loading docks, depots, traffic surface, institutions and for food processing plants.

ARCHITECTURAL METAL CONFAB

The 17th Annual Convention of the National Association of Architectural Metal Manufacturers will be held May 22-26, 1955 at the Broadmore Hotel, Colorado Springs, Colorado.

PUMICE INSTITUTE ORGANIZED

Organization of a new Pumice Institute and election of Lloyd Williamson of Cascade Pumice, Bend, as president; Robert H. McClure, New York, vice-president; R. W. Alley, Jr., Santa Fe, and William E. Miller of Bend, has been announced fol-

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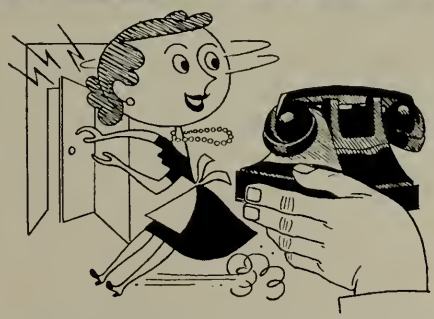

How to take the "run" out of running a home

Architects and builders are very conscious of their duty to make the lot of the housewife as easy as possible. And one of the best ways to take the "run" out of running a home is to put built-in telephone facilities in your plans. They save all those unnecessary steps from the kitchen or the bedroom to the living room to answer the phone. And when you plan telephone outlets in all parts of the homes you build, they'll be both modern and efficient.

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lowing the annual meeting of the National Concrete Products Manufacturers in Cleveland.

The new group will unify efforts of pumice producers to make available technical data and information to architects, structural engineers, and builders.

Among producers holding membership in the Institute are: General Pumice Corpn, Santa Fe, New Mexico; Clark Concrete Construction Co., Idaho Falls, Idaho; Builders Supply Company, Medford, Oregon; Central Oregon Pumice, Bend, Oregon; Layrite Concrete Products, Kennewick and Seattle, Washington; Zaugg Concrete Masonry, Tacoma, Washington; Honey Concrete Products, Inc., Santa Fe, New Mexico; and Cascade Pumice, Bend, Oregon.

HAROLD HENRY NAMED LA REPRESENTATIVE

Harold Henry has been appointed sales engineer for the DV Controls Division of Engineered Instruments, Inc., Hayward, California, and will serve the greater Los Angeles area.

A graduate of Annapolis, Henry has been active in U. S. Navy engineering circles.

SCHOOL BONDS APPROVED

Electors of the Brisbane Elementary School District, Brisbane, San Mateo county, recently approved issuance of school bonds at a special election for the purpose of constructing a new intermediate school building.

The new plant designed by Architect Thos. M. Edwards of San Francisco, will comprise 6-classrooms, administration, home-making, library, multi-purpose and kitchen, shops and toilet rooms.

YOUTH CENTER

Architect Maurice H. Robertson of Palo Verdes Estates, is preparing plans for the construction of a 2-story frame and stucco Youth Center in Los Angeles for the Vermont Avenue Presbyterian Church.

The building will contain 12,000 sq. ft. in area, with composition roof, concrete slab, asphalt tile an wood floors, aluminum sash, individual gas heaters and acoustic tile.

APPOINTED MANAGER PRODUCTS SECTION

F. R. Belville has been appointed to the position of manager of the special products section of the Enterprise Engine & Machinery Company, subsidiary of General Metals Corpn, San Francisco, according to Wm. Clausen, executive vice president and general manager.

Belville will have managerial responsibility for all sales activities in this section. A graduate of the University of California, 1940, he has been associated with Enterprise since 1946.

NEW JUNIOR HIGH SCHOOL

The architectural firm of Ferris & Erskine of Reno, Nevada, is completing drawings for construction of a new Junior High School building to be built in Reno for the Reno School District.

The new school will be of concrete block and frame with some structural steel and will contain all modern facilities necessary to maintain 30 classrooms, an administration office, library, gymnasium, multi-purpose rooms, kitchen, music room, shops, and toilet rooms.

Estimated cost is $750,000.

VINYL PLASTIC PAINT INTRODUCED RECENTLY

A completely new development in paints, a vinyl plastic base paint for both home and professional painters, that can be thinned with water, yet is highly resistant to water and weather when applied is now being introduced.

Known as "T.V.P." the paint beautifies and protects masonry, brick, concrete, and other hard-to-paint surfaces. No primer coat is necessary. Can be applied directly to wallboard, hot plaster, plasterboard and asbestos without bleeding through. Manufactured by TAMOS INDUSTRIES, INC., 228 N. LaSalle St., Chicago 1, Ill.

CONVERT HOME TO LIBRARY

Architect Raymond Jones of Glendale is completing plans for conversion of the Brand Castle residence in Brand Park, Glendale, into a cultural Library for the City of Glendale.

The work includes extensive interior and exterior remodeling, sandblasting, new composition roofing, composition covering over existing wood floors, acoustic plaster ceiling, new heating, plumbing and electrical systems.

The Library, when completed, will con-

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NEW AIR CONDITIONING UNIT NOW AVAILABLE

Twenty-four different sizes of combination units in one complete self contained cabinet for both heating and cooling are now available in the new combination air conditioning units just introduced by Shana Manufacturing, Inc., of Chicago.

To meet the needs of the buyers market as well as replacement, the unit consists of 2 and 3 ton air-cooled or water cooled combination units, either gas or oil fired. Included is all heating and cooling controls, blower and motor for heating and cooling cycle, and a common top over heating and cooling plenum which contains automatic dampers.

These new combination units in one self contained cabinet; for complete data write the Shana Mfg. Inc., Chicago.

TUBERCULOSIS HOSPITAL

Architect Ernest F. Winkler of San Francisco, is completing plans for construction of a 50-bed tuberculosis hospital building to be built in connection with the Humboldt County Hospital in Eureka, California.

The new unit will be of 2-story reinforced concrete construction and will cost an estimated $480,000.

AUTO SALES BUILDING

Architects Stiles and Robert Clements of Los Angeles are completing plans for construction of a 1-story, frame and brick addition to the auto sales building of the O'Connor Lincoln-Mercury Dealer on Crenshaw Blvd. in Los Angeles.

The addition will be 164x147 ft. in area; will have composition and gravel roofing, asphalt tile, terrazzo and concrete floors, electric heaters in toilets, metal toilet partitions, insulation, steel rolling shutter doors, central heating and hot water system, pipe columns, tapered steel girders, painting, electric work, plumbing, asphalt concrete paving.

BONDS VOTED FOR GYMNASIUM

Voters of the Hanford (California) Union High School District approved the issuance and sale of $398,000 in School Bonds, with funds to be used for construction of a new gymnasium building at the High School.

ROOFERS INSULATING GUIDE AVAILABLE

A handy pocket size roofers' insulating guide is available, without cost, from the Pittsburgh Corning Corpn. It is printed on a 3¼" by 5½" heavy, varnished card, and gives the resistance (R) and U values of common roof construction, both uninsulated and insulated with various thicknesses of cellular glass insulation.

The formula for calculating the U value of a completed roof by adding the various resistance (R) values is also included, together with a typical example.

WM. MEIN, JR. ELECTED ENGINEER VICE PRESIDENT

William W. Mein, Jr., San Francisco, has been elected vice-president of the American Institute of Mining, Metallurgi-

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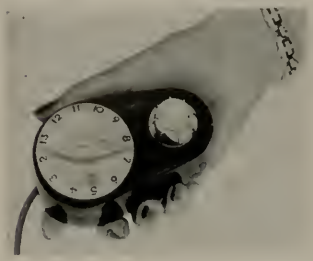

Offering fully automatic operation, the volume and channel selecting are operated by a portable, hand size remote control. This motor driven unit will automatically lock-in the best balanced picture and sound from any part of the room. For additional information on Built-in TV and other high fidelity components write to Walso Electronic Corpn, 3225 Exposition Place, Los Angeles.

SMOOT-HOLMAN EXPANDS ENGINEERING DEPARTMENT

Bill Jones, M.S., EE., has been employed as a full time research engineer with the Smoot-Holman Company, Los Angeles, according to a recent announcement by Gale Thomas, chief engineer of the firm.

Jones operated a consulting service prior to joining Smoot-Holman.

Thomas also announced the installation of new equipment for stepped-up research and development activities.

SWIMMING POOL

Architect Adrian Malone of San Francisco is completing plans for construction of a 30x75 ft. reinforced concrete swimming pool, with showers and lockers, for the Berkeley Tennis Club, Berkeley.

Estimated cost of the project is $50,000.

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WALTER GORDON, Architect

MAY 1955

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Vol. 201 No. 2

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Editor

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★

COVER PICTURE

DINING ROOMS

There is a reawakened interest in "dining rooms", and this view of Architect Walter Gordon's dining room for Mr. & Mrs. James Bush, Portland, Oregon, is keynoted by informality, accessibility, and exclusiveness. See page 14 for complete details.

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ARCHITECT AND ENGINEER

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Los Angeles 5; Telephone DUnkirk 7-8135. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c.

. EDITORIAL NOTES .

GARAGES COST MORE

One of the seldom considered reasons why costs of a new home are higher, and particularly a two-car garage home, is because the material used in the construction of a garage has increased during the past few years in quantity as well as price.

A few years ago a garage with an 8-foot width was ample for any automobile, but new cars have been getting wider and longer, until today a garage width which provides ample room for the housewife to get in and out of the car with a bundle of groceries, to maneuver the car in and out with less danger of banging-up fenders and a large repair bill requires a lot more building material and ground space.

Just in case you are planning on a new home, plus a one or two-car garage, or might even be only interested out of curiosity, here are the dimensions of some of the new 1955 model automobiles:

The new Chevrolet is 105.6" long by 74" wide.

The new Ford is 198.5" long by 75.9" wide.

The new Cadillac is up to 237" long by 79.7" wide

The new Chrysler is 218.6" long by 79.1" wide.

The new automobiles themselves cost more, but facilities for keeping them properly protected at home is also costing more.

* * *

Oil heating offers the homeowner fully automatic service—fuel oil is available at money saving cost, and modern equipment requires little upkeep.

* * *

DIRE NEED FOR SAFEGUARDS

The results arising from lack of safeguards over employee welfare funds were never more graphically illustrated than in two cases brought to light in public testimony before the Senate Subcommittee on Pension and Welfare Funds.

A National union with 50,000 members hired an insurance consultant at a dollar a year. Testimony indicated he was not content with collecting $335,000 in commissions but used various methods over a period of years to retain almost a million dollars.

When asked about the disposition of this large sum, the consultant pleaded the Fifth Amendment. But other witnesses testified that the money went to the secretary-treasurer of the international union. It was brought out that the latter individual also was the recipient of more than $160,000 additional in welfare money.

Appearing before the Senate Subcommittee, the secretary-treasurer refused to answer questions, invoking the Fifth Amendment a total of 90 times and bringing upon himself a recommendation for a contempt citation. Senate investigators, after examining the books of the international, said none of the money reached the union treasury.

In the second case, testimony disclosed how a local union president was the sole control of funds into which 800 employees paid $123,681 and their employers $213,800 during a period of four years, although there had been no collective bargaining agreement since 1942 nor authorization to check contributions from the employees' wages.

Senate investigators found only $23,000 left in the fund's account. A total of $245,000 could not be accounted for in any way. Expenditures were uncovered for expensive automobiles, union convention expenses, salaries for union business agents, personal traveling expenses, political contributions and others.

The testimony in both cases makes it evident that present laws have not been adequately enforced. All persons with interests in these particular funds appear to have neglected their responsibilities. There has been no enforcement of either federal or state statutes. State insurance commissions have not given adequate attention to policing the funds. Management abdicated its responsibility, while the union leadership involved failed to protect the members from schemes defrauding them of their rightful benefits.

Obviously, unless the present trend is corrected, Pension and Welfare Funds are in for some rough going in the future.

* * *

Socialism has never been initiated by the masses—it is a dream of the planner and certain intellectuals.

* * *

ECONOMY AT WORK

Defenders of big government budgets invariably argue that a reduction in government expenditures would hurt essential services.

But economy-minded businessmen now in the Federal government are demonstrating that there's plenty of waste which can be eliminated without injuring important services.

The Department of Defense recently offered a new example. In a directive, Secretary Wilson ordered the four military services to share in the use of the department's vast, world-wide storage facilities.

A unit in need of storage space can now use unfilled facilities of other units in its area. It will reimburse the lending units for the costs.

The order undoubtedly wil make unnecessary the erection of many warehouses.

The directive stipulates that a unit will "be required" to use another unit's facilities when it cannot "more economically provide for its requirements through the use of services under the Department's Commercial Warehouse Service Plan or within its own facilities."

STORAGE TANKS
for Oregon grain
completed this year.

Architect & Engineer: Mentor C. Addicks for Cargill, Incorporated
Chief Engineer: H. M. Anundson, Portland Commission of Public Docks
Fabricating & Erection: American Pipe and Construction Company, Northwest Division

Storehouses of steel...

Taken inside a bin (before roof installation), photograph illustrates wall construction and "sway-back" dipping eave line. This unique feature gives roofs a shorter reach to bins' oval ends.

New on the Portland waterfront, built by the city's Commission of Public Docks, are eight huge, oval-shaped bins, each measuring 190 feet in length, 135 feet across. Filled to capacity, these steel storage bins hold 5,400,000 bushels of grain (in terms of wheat, for example, that is enough to make 350 million loaves of bread). To save erection costs, American Pipe & Construction Co. laid roof plates one over another, shingle-like, then welded them in place. The siding construction of the 60′ high bins is made up of three separate courses of graduated thicknesses: the bottom plates are 7/16″ gauge, middle 5/16″, and the top courses ¼″ gauge. Flooring is steel, too . . . and all this steel came from the mills of United States Steel.

USS Products for Heavy Construction

United States Steel Corporation · Columbia-Geneva Steel Division

UNITED STATES STEEL

NEWS and COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., will exhibit the following schedule during May:

SPECIAL EXHIBITIONS: Paintings by Henry Koerner; High Style and Chinese Art; Jewelry by Peter Macchiarini; Masterpieces of Drawings from the Museum of Besancon, France; Old Master Drawings and Contemporary Drawings from the museum collections, augmented with notable works from local private collections; Paintings in Black and White by Van Day Truex; and Paintings by Hanna Kali.

Achenbach Foundation for Graphic Arts is showing a Retrospective Exhibition of the work of Ernest Haskell at the museum, and on loan exhibition at the San Francisco Public Library is an exhibition of Regionalism in American Prints of the Thirties.

SPECIAL EVENTS: Organ recital each Saturday and Sunday at 3:00 p.m.; Art Classes for children are held each Saturday morning at 10 o'clock—ages 6-14. The Motion Picture Series, Saturdays, has been temporarily discontinued.

The museum is open daily 10 a.m. to 5 p.m., holidays 1 p.m. to 5 p.m.

GRETE WILLIAMS OPENS STUDIO

Opening presentation of the Grete Williams Studio, 2095 Union Street, San Francisco, was a showing of Watercolors by the young American artist Robert Kensinger. Born in Santa Cruz in 1926, he attended Hartnell College in Salinas and won his first awards in 1948-49, which permitted continuation of art study and stage design at the Chouinard Art Institute of Los Angeles.

Kensinger is now a resident of San Francisco.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has arranged a program of special exhibitions and events for May which includes the following:

EXHIBITIONS: Bay Region Painting and Sculpture, selected by the Boards of the San Francisco Museum of Art; Canadian Eskimo Sculpture; Three Contemporary Sculptors, Reg Butler representing the United Kingdom; Berto Lardera of Italy, and David Smith of the United States; Art in America; 74th Annual Painting and Sculpture Exhibition of the San Francisco Art Association; San Francisco Bay Region Architecture; and the Neuberger Collection.

SPECIAL EVENTS: Concerts and Special Film Showings; Lecture Tours of the museum each Sunday at 3 o'clock; Gallery Tours on each Wednesday evening at 8 p.m.; and Adventure in Drawing and Painting, Friday evenings at 7:30; Studio of Art for the Layman; and Children's Saturday morning art classes.

Museum open daily.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting the Fourteenth Annual Pacific Coast Ceramic Exhibition and Sale of Sculpture and Pottery—Jury Selection and Awards.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is presenting the following special exhibitions and events for May:

EXHIBITIONS: Buildings in the Netherlands; Contemporary Industrial Arts of Thirteen Countries; Contemporary Swedish Paintings; Ancient Peruvian Art, from the Nathan Cummings Collection; and 19th and 20th Century French Paintings, from the Nathan Cummings Collection. A documentary film, "Modern Architecture in the Netherlands," will be shown in conjunction with the exhibition Sunday afternoon May 15 at 3 and 4 o'clock and Tuesday afternoon, May 24, at 3 and 4 o'clock, admission free.

EVENTS: Art and Ideas, a study of the changing picture of reality; Seminars in the history of art; painting and workshop for amateurs; classes in the enjoyment of art for adults; and picture making, art and nature and the art club for children.

Museum open daily.

74th ANNUAL PAINTING AND SCULPTURE EXHIBITION

The 74th Annual Painting and Sculpture Exhibition of the San Francisco Art Association containing 76 works is now on exhibition at the San Francisco Museum of Art.

The Jury of Selection for Painting was composed of Dr. Jermayne MacAgy, Chairman, Esteban Vicente, Ernest Born, Ann O'Hanlon, and Roger Barr. The Jury of Awards for Painting consisted of Dr. Jermayne MacAgy, Chairman, Esteban Vicente and Ernest Born. For sculpture, the Jury of Selection and Awards was Keith Monroe, Chairman, Mario Ciampi and David Lemon.

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CONTRA COSTA COUNTY ADMINISTRATION BUILDING
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Contractor: Stolte, Inc.

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NON-TECHNICALLY SPEAKING

By RUSSELL BJORN, Managing Director, WIC

Assuming that you, as a regular reader of this publication, have noticed, or read, the "TECHNICALLY SPEAKING" articles which have appeared herein since the first of the year, then you are on "speaking terms" with the activities of the Woodwork Institute of California. Each of these articles had to do with technical material; but, I being a non-technical person, can only write about our activities in keeping with that definition.

While none of us expects to live long enough to see the day when "spec" writing, detailing and millwork procedure, will come to us as they should, we must at least admit that there has been considerable improvement in the mechanical side of our jobs. In the past—as I review it—our most frequent bottlenecks were caused by mechanical problems, and to a certain degree they still are a factor. By "mechanical problems" I mean detailing, "spec" writing, architecture, engineering, machine skill, tooling and the like. In saying that, I can quickly realize that I'll be taken to task for classifying "architecture and engineering" as a bit of mechanics, however, that is not my intention, other than to compliment that profession for its versatility features.

RUSSELL BJORN
Managing Director

Today, however, I think we all agree that most of our bottlenecks are caused by the human element, and not by mechanical elements, so much. Consequently, conditions beyond our control, as individuals, have compelled us to concentrate upon group relationships with our component colleagues for the satisfactory solution to our mutual problems. But, sad to relate, the practice of such relationships has been at the expense of our person-to-person contacts, or relationships. As a result, we have seen our friends, associates and those who depend upon each other for mutual benefit, gather into groups and separate from each other in units of their own. This is fine and perfectly desirable and is the right of any group with common problems to exercise. Yet, we have been so busy with group problems, procedures, etc., that we have lost sight of one all-important elementary fact: No two individuals in these groups are alike; no two have the same needs, wants and ambitions; each has his own personal peculiarities, likes and dislikes, feelings and shortcomings.

This being the case, the Woodwork Institute of California, in addition to making technical services for millwork, standards and that sort of thing a primary function of the W.I.C. to the architectural and engineering professions, also realizes the practical value of friendly relationships among various associations who are tied in with the building industry as well as within the members of W.I.C. In short, we desire to cooperate with the A.I.A. Chapters of California, the Construction Specification Institute, the Producers Council, the California Council of Architects, and others identified with the building business to the end that the human elements of our jobs may be lessened as a deterent to production.

For example, our Technical Consultant, who spends all his time in the field, is not instructed to render a "cut-and-dried" service but to make his services as personal as possible for each one upon whom he calls. Our reference library compiled and gathered at our headquarters at 681 Market in San Francisco, is designed with the same goal in mind. We believe this so thoroughly—this is, about the human element in our relationships—that we wish to make the services and activities of W.I.C. as human as possible instead of too mechanical. It goes without saying that human beings are fundamentally and incurably individualists at heart. This characteristic probably holds true with draftsmen and architects and engineers to a higher degree than in a lot of vocations; and this is why W.I.C. desires to cooperate with the professions, not only in mechanical and purely technical matters, but also in a non-technical capacity.

UNIVERSITY OF OREGON
SCHOOL OF ARCHITECTURE AND ALLIED ARTS

CONDUCTS COLLABORATIVE COMMERCIAL PROBLEM

By SIDNEY W. LITTLE, Dean
School of Architecture and Allied Arts
University of Oregon, Eugene

SIDNEY W. LITTLE
Dean

One of the highlights of the 1954-55 academic program at the University of Oregon School of Architecture and Allied Arts came to a close on March 14th. Mr. Frank Emery Cox* made his second visit to the campus in order to conduct the final review of a project on which he has been the visiting consultant, lecturer and critic.

Mr. Cox is well known throughout the United States and Canada as a business development analyst and student of urban problems. His specialty has

EDITOR'S NOTE:—Frank Emory Cox, international Sales Research and Business Development Analyst, Kauneer Company, Berkeley, California.

CAPTAIN of Team No. 1, explaining parking layout of Center as they planned it. Areas occupied in the 10 Centers planned by groups ranged from 12-acres ta 45-acres total area.

been in the field of scientifically planned shopping centers and in the rehabilitation of downtown business areas. Reports of his research work have been published from time to time in various magazines. Recently, the Architect and Engineer magazine devoted two issues to as many installments on the subject "What Makes a Shopping Center Successful" authored by him. It was largely through these magazine articles that contacts were made by the University. Mr. Cox accepted the invitation to the University of Oregon to conduct this special student project dealing with a Shopping Center. He was asked to outline the basic conditions that would be involved in planning such a venture prior to his arrival at the University. This resulted in the development of the following program:

THE PROBLEM

In the typical American city, vast increases in population are taking place in fringe areas outside corporate limits. By comparison, the central urban areas are growing slowly, if at all. Although this trend of urban and suburban growth has been in evidence for some time, the liberating influence created by the increased use of the automobile has contributed to a rapidly accellerated rate in our metropolitan areas.

As a result, retail business has to some extent moved to the suburbs to capitalize on the geographic shift of purchasing power. The suburban scientifically planned shopping center is emerging as a new and significant architectural problem. Far from being a duplication of the downtown business district, it serves a new function in the living patterns of cities and their suburbs. Its design objectives are unique. Some distinctive characteristics involve convenience of access, freedom from congestion, a leisurely and pleasant shopping environment, adequate and proximate parking facilities, and the proper employment of good merchandising principles surrounding scientific relationships of business with affinities for each other. All of this is being planned for the advantages to the retailers of maximum crowds and healthy competition. The architect thus finds himself faced with both a challenge and an opportunity. These questions then involve design, plan, traffic studies, merchandising, buying habits, parking facilities, financing, economics, and many other items.

AN intensive discussian of one of the projects is being analyzed by Mr. Frank Emery Cox and Team Captain with his group and other participants in the discussian.

EXPLANATION being made by one Team Captain of project developed by his group.

Note — Faculty members interspersed with the student participants.

Various perspectives, plans and layouts may be seen on the wall.

INTENT

It was intended that the problem provide an opportunity to investigate and solve as nearly as possible the following basic points:

1. Financial return to the owner as a major emphasis.
2. Considerations of the economics of merchandising.
3. Concern with the fundamental aspects of city planning.
4. Organization and full architectural development of a complex of numerous elements in a single comprehensive scheme.
5. The handling and influencing of large groups of people in their buying habits and activities.
6. The control of vehicular traffic and parking.
7. Experience in a major collaborative effort.

SITUATION

The property selected at Eugene for the University of Oregon project was assumed to have been acquired by a company which specialized in promoting and managing suburban shopping centers. This company would plan to develop on the selected site a center to serve the needs of Eugene's fastest growing suburban area. The company would have as a primary objective the creation of an investment which would yield a guaranteel minimum net return on a long-term basis. It was also interested in creating an attractive architectural work, a significant social amenity, and an effective entity in over-all city planning structure. All of these were considered attributes which would contribute to the basic goal of urban growth and development.

DIRECTION

The architectural student was directed to gather all necessary data available on economics, future road patterns, soil adaptability, codes, zoning, buying habits, and other pertinent information. He was expected to compile and develop a workable program. From this program he was to design an efficient project to serve the purpose. (Mr. Cox provided a copious file of material on economics and shopping center fundamentals, including opinions and data of realtors, subdividers, and economists having to do with the over-all project. This material, together with supplementary library data, then became the text for the participants to follow. Other sources of text material were from the libraries of the Urban Land Institute, National Association of Real Estate Boards, architectural magazines and journals, trade media, city planning brochures and books.

ORGANIZATION

It was decided that to obtain the best results in collaborative operation, th groups should be divided into teams. Ten teams of six to seven individuals each were selected. Don Rounds served as Chairman of Team #1; Bill Logan, Chairman, Team #2; Ralph Carpino, Chairman, Team #3; Bob Oringdulph, Chairman, Team #4; Larry Bissett, Chairman, Team

(See page 34)

OBSOLETE DESIGN HELPS PROVOKE PRISON RIOTS

Modern Architectural Design Essential In Solution of This National Problem

Part 1

By CLARENCE B. LITCHFIELD*
A.I.A., Architect

The rash of violent riots and strikes that has ripped the country's penal institutions in recent years has not surprised those of us studying modern penology. Their occurrence has been all too easy to predict, sad to say. It would be no surprise if another of these furious outbreaks flared up tomorrow, or the following day, more next week and the week after. So many of the causes for these uprisings are built right into the institutions now in use that any survey of present penal systems points toward one inescapable conclusion: More riots to come—unless better living conditions are provided for inmates, and there is greater understanding by all our citizens of the problems of correction. The scope of these changes and understandings will have to be broad.

Riots can be averted, but right now over 90 per cent of our penal and correctional institutions contain potential triggers for new outbreaks. Inadequate, outmoded facilities are filled with the seeds of discontent and violence that will certainly grow unless urgent measures are taken. Of the 152 state institutions in the United States, only an appallingly small number — approximately 11 per cent — have been erected in the last 50 years. And a number of these were built from design concepts which place them in the antique category.

PENAL INFLUENCES

The deplorable conditions in an overwhelming majority of institutions are not only breeding riots within their walls—they are contributing to the rising crime rate on the outside by serving as graduate courses in crime. The spread of crime that is causing wide-spread concern these days is given an added impetus by these institutions that harden instead of rehabilitate their inmates. The penal institution is always an influence on any one incarcerated in it—either positively or negatively. When a man comes out of a penal institution he has either been helped or hurt, and if he's been hurt, society has also been hurt. Confining men we plan to return to free society in the kind of conditions found in nine out of ten of the penal plants in use today, is, in plain words, "asking for trouble."

Social, political and scientific thinking develops from year to year, and our schools and hospitals, automobiles and battleships keep pace with it. Methods and instruments for combating crime — like those for transportation, communication, healing and defense—also change from week to week. The trouble is we are trying to rehabilitate offenders in public custody with means half a century old and with inadequate budgets. We use television of police line-ups to help solve crimes, but most of the penal institutions we are using to check the spread of crime were built before the radio was even invented, before the first automobile appeared on our streets.

We would not think of trying to treat the sick with the same methods and instruments used in the Spanish American War, nor defend ourselves with the archaic weapons Teddy Roosevelt carried there, but we are attempting to use institutions of that period to treat the broad and complex ailments of today's crime.

BASIC NEEDS

This is not to suggest, however, that the causes for all riots are antiquated, inadequate structures. That is, of course, not so. A number of elements, as we all know, are necessary to the successful and effective functioning of a correctional institution. The first basic need is for trained and understanding personnel. Conscientious and enlightened people must be had, people who understand the scope and significance of the job they are doing, who realize its aim is rehabilitation, not punishment.

The other major requirement is tools for the personnel to work with—adequate space, equipment and facilities designed for the complex job of rehabilitation. The institution must provide these tools. Even the best personnel with the highest aims and the best-planned program can't fully accomplish their aims without the proper facilities.

The institution is the instrument with which we are trying to work near-miracles of rehabilitation.

**NOTE: Clarence B. Litchfield delivered this address at New York University on April 30, 1955; he is a partner in the architectural firm of La Pierre, Litchfield & Partners of New York, designers of the Federal prison at Lewisburg, Pa.; City Prison and Remand Shelter, Brooklyn, and others; and is an outstanding international authority on prison design. ARCHITECT & ENGINEER is publishing the complete text of Mr. Litchfield's remarks—Part I appearing herewith and Part II will appear in the June issue. Ed*

The institution is the environment which confines the human beings we are attempting to remake. The institution is part of the constant pressure we exert on the inmates, both directly and indirectly. The institution is all we are giving them to live and exist in for a considerable length of time. It speaks to the inmates all the time and in every aspect, our attitude toward them, our intentions for them, our respect, concern and trust—or our lack of it. And the institution says all these things not in words but in concrete terms which determine what kind of life these human beings may be allowed to have.

In all of these ways the institution itself is a dynamic force—a continual 24-hour-a-day force—for either aiding or destroying the efforts to remake the inmates into healthy, socially adjusted human beings. For that reason, outmoded design and antiquated facilities do more than incite rebellion, violence and distrust by inflicting excessively harsh conditions on inmates directly. Inadequate buildings hamper and often block many phases of the correctional program.

For example, badly designed institutions make it impossible to segregate the different types of inmates according to sound principles of classification. Thus, the very dangerous, psychotic, vicious and perverted few, with the manageable and responsive majority, which blocks proper handling of all inmates.

Another example of the disastrous effects of such inadequacies is the idleness they cause—idleness which destroys morale with deadly boredom, stirs restless dissatisfaction and starts individual and factional fights between inmates. It is idleness which blocks the building of new interest in life gained by recreation or learning a productive job. It is a truly poisonous thing, this idleness, but it is the inescapable result of poorly designed, antiquated institutions built without adequate acreage.

No amount of competent personnel or enlightened planning, not the best-aimed program in the world, can make such poorly designed institutions do their proper jobs.

CONDITIONS CREATE PROBLEMS

A prototype of the disturbances engendered by the bad conditions in antiquated institutions was the Trenton, N. J. State Prison Riot which occurred in April, 1952. On the morning of April 15, 69 prisoners barricaded themselves in the institution print shop holding four prisoners. They spent three days there and did not give up until they got a promise from Commissioner Sanford Bates that an investigation and report would be made by the Osborne Association.

When a committee of penological experts appointed by the Governor of New Jersey made a report on the findings, the first grievance listed on conditions and practices in the institution was, "inadequacies in institution plants." The second was "hetrogeneous inmate population;" the third, "idleness and inadequacies of rehabilitation programs;" the fourth, "personnel problems;" the fifth, "disciplinary practices;" and the sixth, "miscellaneous factors: shortage of necessities, visiting arrangements, food, etc."

Not only that, the second and third grievances were, as we have seen, things to which the antiquated, poorly designed families directly contributed.

The committee reported that the institution was "inadequate" and "outmoded" and, warned the governor, "Until Trenton Prison is replaced by a modern institution . . . one must not expect any warden or staff to achieve standards consistent with New Jersey's position among the States."

One wing of this Trenton institution was built in 1835 resembling a medieval dungeon. The newest wing was erected in 1902. There were only jobs for 900 inmates at a time in the institution, leaving from 400 to 700 idle all the time. When the riot began 25 per cent of the inmates were idle. But Trenton Prison is still in use.

This is the portrait of the kind of institution with which we breed riots and strikes. This unfortunately is no isolated example. Since 1952 riots have occurred repeatedly all over the country.

DOING SOMETHING

What's the answer? How are we to go about getting it?

The answer is that we must replace most of the institutions in the country with a new kind of correctional institution, an institution designed in every aspect for the single purpose of rehabilitating human beings, not punishing them. And we must obtain an increasing number of trained, qualified personnel to make these institutions the rejuvenative force they should be in our society. Also society must allow a sufficient budget for a rounded program.

This brings us to the all important question of "how" we are to go about achieving these improvements. The general public and the legislators on whom the penal systems depend for support are asleep to the desperate nature of the needs in the correctional field.. The first step—perhaps we should have mentioned it at the very beginning here, because it is really the first thing that we in the field can and must do—is to initiate a vigorous program of public relations to educate the people to the situation in the correctional field, and get them behind modern correctional thinking.

This can best be achieved by bringing before the public the concrete results of this enlightened thinking, to show them how the ideal correctional institution works, how it can act as a regenerative force on inmates, how it can remould human beings for their own and society's good.

Let us consider the particulars of what the modern

(See page 35)

A REAWAKENED INTEREST IN DINING ROOMS

By ARTHUR W. PRIAULX

With consummate skill and considerable ingenuity, a goodly number of northwest architects are devoting more time and imagination to creating dining rooms that are a credit to the fine contemporary and traditional homes they are designing. In too many modern homes, the dining room appears to be an afterthought, tucked into some unused space, or so badly broken up by converging traffic lines and drafty doors and openings that it is almost unusable.

These progressive architects are proving that dining rooms can be functional and beautiful, and when properly designed as attractive, livable parts of the home can justify their space allocation by their more frequent use.

In almost every instance where the dining room is popular and much in use, the designer has succeeded in developing a homelike atmosphere with an informal charm and has made this room especially desirable by installing every possible handy gadget to make the serving of meals a pleasure and not a chore.

CONCEALED BUFFET

One of many interesting innovations being introduced into western home dining area design.

The Gordon Carey Home McMinnville, Oregon

Richard Sundeleaf, Architect

As in other sections of compact contemporary homes, the designers have gone to the walls of the dining rooms to get much needed storage. The variety of these wall storage units, builtin buffets, concealed china closets and disappearing linen and silverware storage drawers in intriguing and demonstrates the wide range of possibilities.

As in the lovely Nils Hult residence near Eugene, where Architect Clare Hamlin designed a beautiful backbar (see page 15), a goodly number of these dining rooms provide so much storage in the walls that furniture other than table and chairs is almost unnecessary. The Nils Hult dining room has several outstanding characteristics. It is a cul-de-sac which opens off from a long solarium that joins all sections of the rambling farm home together. Built of birch and cedar, this dining room can accommodate the intimate family or a Sunday supper crowd. Interesting is a sliding unit of a series of hollow squares. This shadow box can be slid over in front of a large picture window to display the varying colors of individual glassware, bottles and china placed in each section. A screening wall of wood and glass panels separates the dining room from adjoining kitchen on one side and entryway on the other. The room is open along the solarium.

To a good many families, dining is family business, but it doesn't necessarily mean black ties and formal duds and early dinner for the children. Family, friends, good food and good conversation seem to go together, and even though a good many of the contemporary homes being built in the Pacific Northwest have spacious patios, extra large living rooms, even family rooms, there is still much demand for separate dining rooms where family and guests may sit down and be comfortable while enjoying their meals.

The trick, then, is to design a room that is distinctive, with a touch of the formal and an indication of its special function, yet with a graceful air of informality. In short, a room where the family will want to eat, and not be forced to go because of mealtime visitors or some stated occasion where elders and children are required to dine together.

Architect George Whittier, of Whittier and Fritsch,

PRIVACY ACHIEVED

In this three walled dining room, which features interesting geometric wall of glass and open sections.

Nils Hult home
Eugene, Oregon

Clare Hamlin
Architect

RESIDENCE
MR. & MRS. JACK BLADINE
McMinnville, Oregon

Among features is the concealed buffet with its spacious storage capacity.

George Whittier, Architect
(Whittier & Fritsch, Architects)

To avoid closed-in feeling, dining room has screened wall, yet there is definite boundary setting it off from living room.

has captured that delightful combination of formalized informality in the home of Mr. and Mrs. Jack Bladine at McMinnville, Oregon (see page 16). The room is located conventionally between kitchen and living areas, but there the conventionality ceases. To avoid an appearance of crowding, one half of the wall space between the living and dining areas is a graceful louvred screen of machine-finished birch panels which reach up to normal door height and are topped with a casing that joins with the formal wall. One wall of this dining room has been finished in well-matched Douglas fir panel boards which contrast well with the other two sides of plaster. The paneled wall has been painted a dark green. Concealed in the wall is a smart and striking cabinet of shelving and drawers for linen, silverware, glassware and china storage. The units are beautifully done in Douglas fir and when not in use are hidden behind two matching doors which close to become part of the paneled wall.

Even tiny floor areas can be made into perfectly acceptable dining rooms if care is taken to make maximum use of every possible square foot of wall space. In the Gordon Carey home at McMinnville, Oregon (see page 14), Architect Richard Sundeleaf has converted such an area into a very attractive dining room which has some exciting features. In a small wall between two doorways, he has designed a builtin buffet for storage of silverware, linens and china which is similar, but smaller than the one in the Bladine home. Doors of panel boards identical with the wall close to conceal the buffet when not in use.

A full storage wall divider is useful for separating dining rooms in open home of Mr. and Mrs. Barney McPhillips, McMinnville, Oregon. George Whittier, Architect. Whittier & Fritsch.

DINING ROOMS . . .

In the open area homes, it is generally necessary to designate various functional spaces by room dividers or sectional furniture. Architect Walter Gordon has designed a fine contemporary home for the James Bush family of Portland in the open area theme which develops a rather unusual dining area (see cover illustration). Informality is the keynote of this room with the delightful combination of Douglas fir beams, western red cedar ceiling and west coast hemlock cabinets combining into a rustic styling which blends well with the adjoining garden area seen through large picture windows. This dining room has been arranged along the half-high window wall and is separated from the kitchen by a high back lounge which serves as a seat for two at one end of the table, with a companion lounge built below the window line accommodating several more diners.

An even more informal dining room in the early American tradition, with cheerful fireplace and hearth in one corner, is an attractive feature of the Earl C. Delashmutt home in Portland (see page 18). Frank Kendall, designer with the architectural firm of Freeman, Hayslip, Tuft and Hewlett, had a hand in this lovely room, although Mrs. Delashmutt determined the basic plans.

Designed in native west coast hemlock, the vertical-grained panel boards have been finished clear to bring out the mellow tones. A doweled, oak-plank floor continues the traditional theme. This room is made for trivets, rag rugs, copper utensils and oil lamps, and is a cozy, friendly headquarters for the family even after meals.

Open area homes present some rather difficult prob-

TRADITIONAL theme is popular in many new dining-keeping rooms, even though remainder of home is modern—home of Mr. and Mrs. Earl C. Delashmutt, Portland, Oregon. Frank Kendall, Designer with Freeman, Hoyslip, Tuft & Hewlett, Architects.

PAUL COLE
Residence
Eugene, Oregon

Simple and graceful lines of this distinctive dining room with built-in's play a major role in decorative scheme as well as use. JOHN L. REYNOLDS, Architect.

JACK KERR Home
Eugene, Oregon

This buffet wall serves double purpose as it screens off family and dining rooms to permit more intimate dining. JOHN STAFFORD, Architect (below).

lems for the architect who would like to define the dining areas with something more than a mere furniture break. In the Barney McPhillip home in McMinnville (see page 17), Architect George Whittier, of Whittier and Fritsch, has presented an interesting solution to this problem. A head-high divider installation separates the entryway from the dining space. One side of the divider contains drawers for linen and silver and lower cabinets with covering doors for other storage. The dining room is in effect a cul-de-sac opening off the living area and served directly with a door into the kitchen. There is definite separation here without interfering with the open area conception. A planter occupies the full area atop the entryway divider.

In some open area homes, it is not possible to avoid traffic problems in the dining area, and when this is unavoidable, it is interesting to see how the architect removes unnecessary traffic impediments. In the Jack Kerr home in Eugene, Architect John Stafford offers a handy solution to such a problem (see page 19). The dining area opens directly into the kitchen. A snack bar serves as a break between the two areas. To provide some privacy in the dining room from the large adjoining family-recreation room, Architect Stafford has used a sectional, ceiling-height storage wall. This unit is an elaborate buffet which provides all necessary storage for the dining room. The buffet serves the snack bar as well. An effective use of contrasting clear-finished cedar siding with pale green woodwork of hemlock develops an unusual storage wall buffet that is as attractive as contemporary furniture and has the merit of being out of the way.

The warmth and intimacy of colonial styling has been exploited in the development of a most unusual dining area in one corner of a large family room in the Orlo Bagley home in Cottage Grove, Oregon (see page 20). Designed by Mrs. Bagley, this room offers an excellent example of compact storage possibilities. The builtin buffet, which occupies half of an entire wall is so planned that its china storage cabinets above and its flat tray-drawer storage below can be reached from either the dining room side or the breakfast nook on the other side of the wall. Made of eight-inch tongue and groove hemlock, the flat-grained wood has been finished with a faint antiqued white, then varnished and waxed, with wrought iron hardware. The colonial motif has been followed throughout the room with each separate use area having distinguishing characteristics, without any appearance of cluttering.

Even though the over-large family room replaces both living and dining rooms in many of the new homes, it is still possible to create the illusion of separateness in a dining area. One of the best devices is in the wise exploition of the adjoining walls. In the Longview home of Cy Goldberg (see page 21), Architect Lawrence Rice has achieved this effect with considerable success. The dining room occupies one corner of the family area, and although there has been no

COLONIAL THEME
has warmth and beauty.

HOME
Orlo Bagley, Cottage Grove, Oregon

use of divisional furniture or room dividers, the effect is complete as this dining room stands out for its special use. The entire effect has been created in the storage wall. Built of birch, it is a lovely full wall of matching builtin cabinets and drawers, with oversize pull handles of birch. The center of interest is a recessed section for large pieces of china, urns, bowls, with sufficient protected wall surface for a display of china collections. The recess wall section, which breaks up the solid wall line, is the key to this particular dining room area and establishes the use theme of that part of the larger family room.

A warm-toned room of simple elegance graces the Paul Cole home in Eugene, Oregon, a design creation of Architect John L. Reynolds (see page 19), who has given this home a dining room with character and distinction. The room is recommended because of its location with respect to the rest of the home, its convenience, its flexibility to handle a small or large dinner group with equal ease, and its beauty.

The Cole's dining room is located between kitchen and living room and opens handily onto a much-used patio. Traffic flow is not a problem. One wall encompasses all of the storage for linens, silverware, china and crockery. The builtins match the walls of random width V-joint paneling, and are beautifully designed. A buffet bar occupies one full wall and includes three sets of matching doors which conceal storage drawers for linens and silverware. The handsome pine top of the buffet provides an adequate work surface, and room as well for coffee maker, chafing dish and other serving utensils. Dish storage is in overhanging cupboards which also run the full length of the wall. Ample space has been allowed for all the glassware, china and pottery and extra high shelves give head room for vases, pitchers and similar objects.

When not in use the cabinet doors close to compose a most attractive wall, made especially striking by the long sweeping lines of the buffet and matching dish cupboard above. The overall effect is one of richness with an overtone of simplicity. Some of this effect is achieved by capitalizing on the native qualities of the wood walls. The clear varnish and wax finish permits texture, grain and color to form the character of the room.

The efforts of these western architects to give some extra attention to design of the dining areas certainly is doing much to create a renewed popularity in the separate dining room as well as in the better defined dining areas in more open homes.

MOST of this dining area is in the wall, yet it has elegance.

HOME
Mr. & Mrs. Cy Goldberg
Longview, Washington

Lawrence Rice, *Architect*

A CALIFORNIA HORSE RANCH

LAGUNA SECA

Monterey County, California

MR. AND MRS. FRANK C. BISHOP, Owners

AERIAL VIEW of the broodmare stables, looking northward. Building in the background is offices (first floor) and farm manager's apartment (second floor). Enclosed on three sides by the broodmare barns are four paddocks reserved for mares in foal and mares with very young foal. Larger grazing paddocks, all capable of irrigation, are partially seen outside the broodmare paddocks.

JOHN M. McWILLIAMS

Designer

Four years ago, when Mr. and Mrs. Frank C. Bishop purchased a 1200 acre mountain ranch in Monterey county, lying between the historic city of Monterey and the famed agricultural city of Salinas and located on the main state highway connecting the two California cities, they did so with the specific

STALLION STABLES

Similar to the broodmare barn wings in structure, but located in a separate valley, at considerable distance from broodmare barns.

In front are paddocks used exclusively by the stallions—one to each stallion—and two hundred yards to the north of the stables is the breeding pit.

OFFICES AT LAGUNA SECA — On first floor there is a secretary's office, with reception area, and a large office used by the owners. Garage for vehicles belonging to the Farm is also in this building, entered from beneath the veranda overhang. Top floor is living quarters for the Farm manager and his family.

thought in mind of building one of the largest, finest, and best equipped commercial breeding farms for thoroughbred horses in the West. They planned, following development of the property, construction of farm personnel living facilities, barns, paddocks and other essential utilities, to import from the "blue grass" country of Kentucky the finest breeding stock available, and to breed on this California farm thoroughbred horses capable of racing in competition with any in the world

To house a broodmare band of thirty or more, six stallions and to accommodate the thirty to forty foals, the Bishops planned a nursery which would combine the best proven features of eastern breeding farms, plus the numerous innovations which would be possible through planning and building such a plant from the ground up. John M. McWilliam, well known San Francisco designer, was employed to study the ranch site and to design the facilities to be known as Laguna Seca, Spanish for "Calm Lake."

The principal building is the two-story combination farm administration office and residence, with the ground floor being used as a garage area and general offices, while the upper story is utilized as an apartment and living quarters for the farm manager and his family.

The offices comprise facilities for a secretary with a reception area, and a large private office which is being used by the owners. A spacious garage for vehicles belonging to the farm is provided at one end of the building and is entered from beneath the veranda overhang.

Directly across the roadway are located the broodmare barns which have been designed in a wide-open "U" shape to form three sides of four large paddocks reserved for mares in foal and mares with very young foal. Larger grazing paddocks, all capable of irrigation and thus a constant source of essential green grass, are located immediately adjacent to the broodmare paddocks.

The interwoven wood fence is provided with an electrical charge of small voltage, five inches inside all fences, to keep the horses away from possible injury. The gates are of aluminum, permitting grooms to open them easily while handling stock or to permit a single person to remove the gates entirely if so desired.

The broodmare barns have box stalls which are

(See page 35)

BROODMARE BARNS

Close-up showing details of construction and use.

The three wings are completely separate as a fire precaution; also, storage facilities for hay and other inflammable materials are distinctly removed from all areas where horses are stabled.

NEW BARRACKS BUILDINGS

U. S. NAVAL AMPHIBIOUS BASE

CORONADO, CALIFORNIA

AUSTIN, FIELD & FAY, A.I.A.

ARCHITECTS and ENGINEERS

A new barracks building to be constructed at the United States Naval Amphibious Base at Coronado, California, designed by the firm of Austin, Field & Fry AIA, Architects and Engineers, is a Type I reinforced concrete and masonry structure, three stories in height, and is designed for lift slab construction. The building contains approximately 102,600 sq. ft. and houses a total of 860 men; 140 Chief Petty Officers and 720 enlisted men. The structure is separated into dormitories accomodating 48 men each, with day rooms for off duty recreation.

The architects, after thoroughly investigating the various types of construction suitable for a building of this type, found that the lift slab method was the most economical and highly satisfactory. After approval by Captain Godwin, District Public Works Officer, 1th Naval District, the design was adopted and plans completed.

In accordance with the austerity program of the Navy, as it relates to its construction program, the building has been carefully studied by the architects and simplified in every way possible. The exterior walls are planned of reinforced brick masonry and hollow gunite. The structure represents the maximum in economy in interior finishes. In practically every instance the basic structure will be the finish of the interior with the exception of the use of tile in toilet and shower rooms.

One of the interesting features of this type of construction is that during lifting operations of the roof and the various floors, building materials for walls and roof are elevated on the slabs as they are moved in position, thus saving lifting by means of hoists during later phases of the construction.

The firm of Austin, Field & Fry estimates that by the use of the lift slab construction method the Navy will enjoy a substantial saving in both construction time and cost.

American Institute of Architects

Clair W. Ditchy, President

Earl T. Heitschmidt, 1st Vice President — George Bain Cummings, Secretary
Howard Eichenbaum, 2nd Vice President — Leon Chatelain, Jr., Treasurer
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National Headquarters—1741 New York Avenue, N. W., Washington, D. C.

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William J. Hess, President (Great Falls); John E. Toohey, Vice-President (Billings); H. C. Cheever, Sec-Treas. (Bozeman). Directors, Oscar J. Ballas, Wm. J. Hess, John E. Toohey. Office of Secty.: Bozeman, Montana.

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Nevada State Board of Architects:
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COAST VALLEYS CHAPTER

The regular business meeting was held in Tiny's Restaurant in San Jose on May 10, and principal discussion related to architectural phases of the new San Jose City Hall.

A second meeting was held May 19 at the Stanford Gallery, Stanford University, and consisted of a joint meeting with the Stanford Student Chapter. Refreshments were served by the W.A.L.

New members: Norton S. Curtis, Warren B. Heid and Thomas A. Hayes, associate members.

WEIHE, FRICK & KRUSE ARCHITECTS MOVE OFFICE

Established for many years in one location in San Francisco, the architectural firm of Weihe, Frick & Kruse, Architects, moved into new and larger offices at 414 Mason Street, San Francisco.

In announcing the new offices the firm also announced the addition of William B. Fox as a partner in the organization.

WASHINGTON STATE CHAPTER

John M. Nelson, Executive Assistant Superintendent of City Light, was the principal speaker at the May meeting. He discussed "Architecture and the Electrical Industry," and pointed out the opportunities in the architectural field to serve the electrical industry's relations with the public.

The annual architectural student and faculty awards

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

Oregon Chapter:
Donald J. Stewart, President; Robert W. Fritsch, Vice-President; Mary Alice Hutchins, Secy.; Walter Gordon, Treas. Directors: Holman J. Barnes, H. Abbott Lawrence, C. H. Wick. Office of Secy., Concord Bldg., Portland.

Pasadena Chapter:
Henry C. Burge, President; William H. Taylor, Vice-President; Douglas Byles, Secretary; Edward Davies, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Sam Hamill, President; Frank Hope, Vice-President; Lee Eggers, Secretary; Bruce Richards, Treasurer; Directors, Victor Wulff, George Lykos, Dick L. Pinnell, Donald Campbell, Louis A. Dean. Office of Secy.: 4730 Palm Ave., La Mesa, Calif.

San Joaquin Chapter:
Alastair Simpson, President; Robert C. Kaestner, Vice President; Philip S. Buckingham, Secretary; Alan Daley, Treasurer. Directors: David H. Horn, Fred L. Swartz, John P. Miller. Office of Secy., 1922 Clinton Ave., Fresno 3, California.

Santa Barbara Chapter:
Roy W. Cheesman, President; Robert I. Hoyt, Vice President; Glen G. Mosher, Secretary; Wallace W. Arendt, Treasurer. Executive Committee: Robert I. Hoyt, Wallace Arendt, Roy Wilson, Lewis Storrs. Office of Secy., 116 E. Sola St., Santa Barbara, California.

Southern California Chapter:
William Gless Balch, President; S. Kenneth Johnson, Vice-President; Stewart Granger, Secretary; Stanley R. Gould, Treasurer. Directors, Cornelius M. Deasy, Herman Charles Light, George Vernon Russell, Ulysses Floyd Rible. Executive Secretary, Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson J. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnston, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelsen, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Robert L. Durham, President; Francis E. Huggard, 1st Vice-President; Thomas F. Hargis, Jr., 2nd Vice-President; Barney E. Grevstad, Secretary; Lloyd J. Lovegren, Treasurer. Miss Dayis Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter:
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors, Kenneth Storment, Victor L. Wulff. Office of Secy.: 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President Harry W. Seckel, Vice President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P. O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS
Malcolm Reynolds, President; Henry L. Wright, Vice-President; George Lind, Secretary; John Bomberger, Treasurer. Miss Rhoda Monks, Office Secretary, Offices, 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BOARD ARCHITECTURAL EXAMINERS:
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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tasker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

dinner of the University of Washington was held May 19 in the Seattle Yacht Club. A special meeting is being held this year for the Chapter Honor Awards evening, rather than trying to combine it with a regular meeting.

New members include David A. Johnson, Dan F. Miller, Joseph Dulet, James W. Evans, Richard V. Peterson and Donn Rothe, associate members, and Charles Krippaehne, junior associate.

W.A.L. SAN JOSE CHAPTER

A recent meeting of the Women's Architectural League was held in the home of Mrs. John Ross in San Jose and plans formulated for a Fall Exhibit to be sponsored by the W.A.L. at Montalvo.

PASADENA CHAPTER

Architect Henry L. Wright, President of the California Council of Architects, and Melton Ferris, Executive Director, discussed problems of the California Council at the May meeting, held at Eaton's May 4, and outlined activities in conjunction with a number of legislative matters currently under consideration by the State Legislature.

Plans were announced by Robert F. Gordon for an Architectural Exhibit to be displayed throughout the Pasadena area.

New associate member, Glenn C. Lareau.

ARCHITECT OPENS OFFICE IN CAIRO, EGYPT

Welton Becket, F.A.I.A., and head of the architectural firm of Welton Becket and Associates, Los Angeles, has announced the opening of an office in Cairo, Egypt, with an initial staff of twenty-four architects, engineers and designers.

James McKeown of Los Angeles will head the new office and will serve as project architect on the Hilton Nile Hotel, a multi-million dollar hotel to be built on the banks of the Nile River.

ARCHITECTS TO MEET IN GLACIER PARK

The annual meeting of the seven A.I.A. chapters of the Northwest Region will meet in Glacier Park September 9-11, with the Montana Chapter serving as the host chapter.

Preliminary program speakers include Eero Saarinen and Victor Gruen.

ARCHITECT EDWARD H. FICKETT APPOINTED TO FHA ADVISORY POST

Architect Edward H. Fickett, A.I.A., Los Angeles, has been appointed to a seven man committee organized by the Federal Housing Administration to study and make recommendations for revision of the federal architectural code.

An outstanding authority on small home design, Fickett will be architectural representative on the new committee, known as the Architectural Standards Advisory Committee, FHA. The Committee is composed of the nation's top small home specialists from architectural and engineering fields.

WITH THE ENGINEERS

Structural Engineers Association of California

G. A. Sedgwick, President (San Francisco); C. M. Herd, Vice-President (Sacramento); James L. Stratta, Secy-Treas. Directors, Ben Benioff, Ernest D. Francis, C. M. Herd, Harold Omstead, Michael V. Pregnoff, G. A. Sedwick, Joseph Sheffet, James L. Stratta, J. G. Wright, William T. Wright. Office of Secy., 140 Geary St., San Francisco 8.

Structural Engineers Association of Northern California

Howard A. Schirmer, President; Walter L. Dickey, Vice-President; Harry B. Corlett, Secretary; Cecil H. Wells, Jr., Asst-Secy; William K. Cloud, Treasurer. Directors, William W. Brewer, Walter B. Dickey, Wesley T. Hayes, Jack Y. Lang, Michael V. Pregnoff, Clarence E. Rinne, Howard A. Schirmer. Office of Secy., 411 Market St., S. F.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy-Treas. Directors, C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers
Los Angeles Section

Louis J. Alexander, President; Nathan D. Whitman, Jr., Vice-President; David L. Narver, Jr., Vice-President; Jack E. McGee, Secretary; Gilbert W. Outland, Treasurer. Directors: Trent R. Dames and Sterling S. Green. Office of Sec'y, 1201 E. California St., Pasadena 6.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

A joint meeting of the Structural Engineers Association of Northern California and the American Welding Society, San Francisco Section, was held in the Engineers Club, San Francisco, May 23rd, to hear La Motte Grover, Welding Engineer for Air Reduction, New York City, discuss "New Specifications and Practices for Structural Welding." Grover told of new structural steel materials now available for welded structures, and their influence upon specification requirements for welding procedures. He also pointed out many instances where the newer steel materials and electrodes can be used to good advantage, and where not, and discussed current practices in design, construction, welding procedures and sequences, and how they are being improved by research.

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AMERICAN SOCIETY FOR CIVIL ENGINEERS—LOS ANGELES SECTION

Members of the ACCE, Los Angeles Section, are planning to visit the nearly completed earth-fill Santa Felicia Dam on Sunday, June 4. The dam, located on Piru Creek near the town of Piru, is being built by the United Water Conservation District, of which Julian Hinds is General Manager and Chief Engineer.

The trip was arranged through Neville S. Long, Construction Engineer, who will provide guides for complete inspection of the site and observation of construction operations.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Rear Admiral J. F. Jelley, CES, USN, president of the Society of American Military Engineers, was the principal speaker at the May meeting held in the Presidio Officers Club, Presidio of San Francisco. He reported on the Thirty-Fifth Annual Meeting of the Society held early in May in New York City.

Admiral Jelley has had a distinguished career in the Civil Engineers Corps of the Navy since graduation from Annapolis in 1927, and currently is Director of the Pacific Division, Bureau of Yards and Docks, at Pearl Harbor.

ENGINEERS JOINT COUNCIL

E. Paul Lange, Assistant Secretary of the Engineers Joint Council, New York, since 1954, has been appointed secretary of the organization. He succeeds Brig. Gen. Stewart E. Reimel, USA (Ret.), of Washington, D.C.

Lange, a native of Seattle, Washington, was gradu-

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Sec.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Sec'y—548 S. Spring St., Los Angeles.

Structural Engineers Association of
Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

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ated from the University of Washington in 1940 and engaged in mining engineering in Idaho, Alaska and South America before serving in World War II. Prior to taking up his new duties with the EJC, he was a company engineer for C. Tennant Sons & Co. of New York.

AMERICAN SOCIETY FOR CIVIL ENGINEERS—SAN FRANCISCO

A joint meeting with the A.I.E.E. was held in the Engineers Club, San Francisco, May 10th, to hear A. D. Edmonston, California State Engineer, Chief of the Division of Water Resources, Department of Public Works, discuss "The Feather River Water Project."

Considered one of the largest reclamation projects ever undertaken, the Feather River project has commanded great attention among engineers and scientific groups throughout the world.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

"Appraisal of the Construction Possibilities for Southern California" was the subject of a talk at the May meeting by Conrad Jamison, Vice-President and Manager of Research Department of the Security-First National Bank of Los Angeles. He gave an expert's interpretation of the building construction outlook as is indicated by examination of the statistics of the recent past and the current situation and then gave his forecast for the future volume.

"Tall Tower Design" was the subject of a second part of the program, with "Introductory Remarks" by John K. Minasian, Consulting Structural Engineer. "A Few Questions on Tower Designs" was moderated by Dr. J. Morley English, Associate Professor of Engineering at the University of California at Los Angeles; "Proposed Revisions of Wind Factors for Towers" was a subject covered by David L. Narver, Jr., Assistant Project Manager of Hyperion Project, of which Holmes & Narver are the Consulting Engineers; and the final consideration was "The World's Tallest Man-Made Structure," a color motion picture on the erection of the 1,572 foot steel tower for station KWTY in Oklahoma City.

New members include Robert W. Haussler, member; Harold R. Hoggan, Harold F. Perla, Bruce Saltman and Paul B. Shippy, associate members.

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PRODUCER'S COUNCIL PAGE

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306 Sharon Bldg.

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Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

The San Francisco Chapter of the Producers' Council held their annual Table-Top Meeting on April 27 in the Terrace Room of the Fairmont Hotel, San Francisco. The meeting was attended by an estimated 300 architects and engineers as well as about 150 other guests. Forty-nine member companies exhibited the latest innovations in their products and were gratified by the interest of the guests. The cocktail party of the Producer's Council, which was part of this meeting, was a great success and gave members and guests an opportunity to make new acquaintances and to renew old ones. The meeting broke up in a gay mood.

TWO MEETING SCHEDULED FOR JUNE

On June 13 the annual business meeting will be held at the Sheraton-Palace Hotel in San Francisco. This will be a luncheon meeting starting at 12:00 noon and the main event will be election of officers for the coming year.

On June 28 there will be a sports event meeting at the Peninsula Country Club in San Mateo and it is hoped that at least 300 will be able to attend, 200 of which should be architects and draftsmen. There will be golf and a baseball game between Producers' Council members and architects; the golf to be early in the day and the baseball game to start about four o'clock. Dinner will be served around seven in the evening.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

APPOINTED MARKET DEVELOPMENT MANAGER

Jerome F. Cummiskey, formerly in charge of commercial sales in the Midwest regional offices in Chicago, has been appointed market development manager for the Commercial division of Minneapolis-Honeywell Regulator Company, according to an announcement by John E. Haines, vice-president.

Charles Sanders, who formerly headed the firm's transportation sales, will be in charge of a new electronics section. Both men will make their headquarters in Minneapolis.

FACTORY SITE PURCHASED

As part of their current expansion program, the California Metal Enameling Company of Los Angeles, recently acquired an acre of land directly across from their present plant site, according to an announcement by J. T. Penton, president of the firm.

The firm now occupies six acres of land.

MEDICAL BUILDING

Architect Donald E. Olsen of Berkeley is completing preliminary studies on the construction of a Medical Building, containing 16 fully equipped suites of professional offices, for the Brookside Medical Center of San Pablo.

It is estimated the two story building will cost $300,000.

HOSPITAL ADDITION

Architect Oleg N. Ivanitsky of El Cerrito is iempleting plans for construction of an addition to the Frank R. Howard Memorial Hospital in Willits.

The new construction will be 1-story, 40x80 ft. and will contain complete facilities for use as a surgical wing of the building.

SCHOOL BONDS APPROVED

Voters of the Livermore Elementary School District approved the issuance and sale of $250,000 in School Bonds with the funds to be used for construction of two new elementary school buildings.

OFFICE BUILDING

Architect Paul R. Hunter of Los Angeles is completing plans for the construction of a 4-story office building with 3-story parking garage in the rear.

The building will have a facing of glass and aluminum window walls on one side and the court side, while the end walls will be finished with stone; air conditioning, plaster and acoustic tile, soundproofing and movable partitions, electrical, plumbing, full basement with dining areas and rest rooms for occupants of the building.

Cost of the land and building will exceed $800,000.

AUDITORIUM AND MUSIC BUILDING

Architects Wright, Metcalf and Parsons of Bakersfield are completing drawings for construction of an auditorium and music building for the Shafter High School, Shafter, for the Kern County Union High School District.

The reinforced concrete building will contain 20,356 sq. ft.; concrete roof deck, composition roofing, concrete and asphalt tile floors, forced air heating and air conditioning, fire doors, plaster, plate glass, fire sprinkler system on stage, ceramic tile, steel and wood roof trusses, sheet metal, steel sash, and insulation.

Estimated cost of the project is $445,000.

THEATRE BUILDING

J. H. Pomeroy & Company of Los Angeles is preparing plans and specifications for construction of a 336-man theater with dressing rooms, stage and parking area to be built at the Yuma Test Station, Yuma, Arizona for the Los Angeles District Corps of Engineers, U. S. Army.

Construction cost is estimated at $120,000.

ENGINEER OPENS OFFICE

C. F. Knowlton, Jr., Civil Engineer, announces the opening of offices at 407 North Maple in Beverly Hills, California.

He was previously associated in the firm of Knowlton & Pedersen.

LUCKY MARKET BUYS SITE

Lucky Stores, Inc., has acquired a site on Texas Street in Fairfield and will soon start construction of a 1-story market building containing 16,000 sq.ft.

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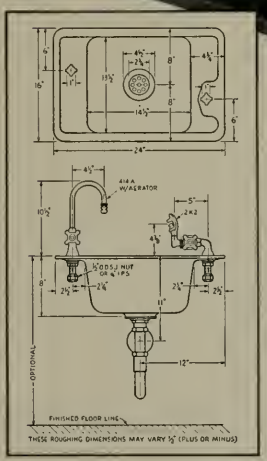

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PERSONALITIES

G. A. SEDGWICK
Engineer
San Francisco, California

George Arthur Sedgwick, well known civil and structural engineer, is president of the Structural Engineers Association of California.

G. A. SEDGWICK
Engineer

Sedgwick is a native son having been born in San Francisco, attended school in Oakland and graduated from the University of California at Berkeley with the degree of B.S. in the College of Civil Engineering.

He is a licensed civil and structural engineer and beginning with graduation, he served the State of California in various engineering capacities with the Division of Architecture, the State Bridge Department and the Board of State Harbor Commissioners in San Francisco. He was engaged in engineering work on the Panama Canal, the canal projects in Canada and with several structural engineering firms. Since 1946 he has been in charge of structural engineering design with W. P. Day and Associates, Architects and Engineers of San Francisco, who designed the new San Francisco air port building.

Sedgwick is married and has one son and one daughter living in Berkeley where his principal hobby is gardening.

At present his extra time is devoted to directing the coming annual convention of the Structural Engineers of the state to be held in the Yosemite Valley on October 6th to 8th where plans are being made for the most diversified technical papers and the most attractive social events, and the largest attendance of members.

VERN R. HUCK NAMED BUILDER OF YEAR

Vern R. Huck, Southern California contractor, has been selected "Builder of the Year" by the Building Contractors Association of California, according to John E. Weskell, president, for outstanding achievements inside and outside of the construction industry.

The award represents the opinion of more than 2,000 members of the B.C.A. throughout Southern California. Presentation of the award will be made during the week of June 9-19.

ARCHITECTURAL AND ENGINEERING FIRM ORGANIZED IN SEATTLE

George W. Stoddard recently announced the formation of a new partnership under the name of George W. Stoddard-Huggard & Associates, Architects & Engineers.

Partners in the new firm are: George W. Stoddard, A.I.A., Francis E. Huggard, A.I.A., Virginia C. Stoddard, A.I.D.; and associates, Hugo Bowe, Architect and Wm. Valentine, Engineer.

Offices of the new organization are located at 1120 Howard, Seattle, Washington.

AN ATOMIC SHELTER FOR A MODERN AGE

An American family with a plot of ground and the price of a new car can now buy a scientifically designed shelter against bombing and radioactive fallout.

The shelter consists of a heavy gauge steel room which is buried under about four feet of earth. Perhaps its most unusual feature is that a lead coating

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PICTURE CREDITS: Hainlin Studio, Page 9, 10, 11; Bob Hopper, Page 23, 24; B. J. Allen, Cover; West Coast Lumbermen's Assn'n, Page 14, 19 (top); Photo Art Studio, Page 15, 16, 17, 18 and 21.

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Whittemore Strain Gauge Tests Prove: BASALITE Exponded Shale Masonry Units have ONLY 0.05%* MAXIMUM SHRINKAGE (saturated to dry)

*Corps of Engineers' requirement is 0.05% shrinkage. National Bureau of Standards require 0.05% shrinkage.

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BASALT ROCK CO., INC.
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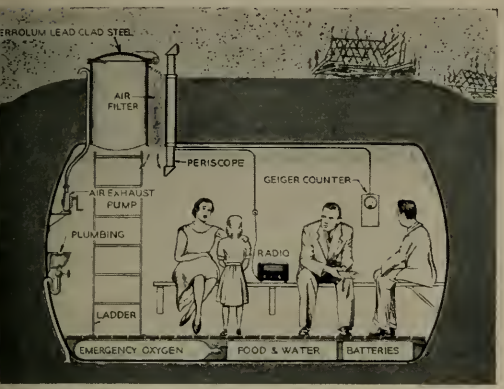
is inseparably bonded to the steel to shield the occupants from dangerous radioactivity.

This is the only shelter, today, which combines



the great physical strength of steel with the shielding properties of lead. Therefore, these shelters can be expected to withstand great shocks from blasts, whether from nuclear origin or from conventional bombs. Where space is at a premium scientists employ lead for shielding against harmful radioactive rays because of its extreme molecular density. Physicists and engineers have expressed the belief that this shelter contains all necessary safety devices.

The unit will house as many as six occupants, has storage space for food, water and clothing, and is equipped with sanitary facilities. The air is purified and filtered through a forced air ventilation system, which removes radioactive particles from the outside air.

Instruments will detect the presence of outside radiation and enable occupants to know when it is safe to emerge. Lights, communications and other accessories are operated from a self contained power source. A periscope may be used to enable occupants to see the area above ground.

The shelter is said to enable its occupants to survive as long as their food and water supplies can be made to last.

FEMINEERS BIRTHDAY ANNIVERSARY OBSERVED

The Fifth Anniversary Luncheon of the "Femineers" was held May 18 at the Allied Arts Guild in Menlo Park, with a tour of Sunset House following the noon luncheon.

Mrs. E. Kenney McKesson, Oakland, is president of the organization this year. Past presidents include Mrs. Arthur C. Horner and Mrs. Edward F. McKeon,

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both of Greenbrae, and Mrs. Arthur B. Smith, Jr., of Colma.

Other officers of the "Femineers" include Mrs. John Fies, San Carlos, vice-president; Mrs. Victor R. Sandner, Berkeley, secretary; Mrs. Fred Nicholson, Daly City, treasurer; and Directors Mrs. Theodore E. Newman, Lafayette; Mrs. Leslie W. Graham, Belvedere; Mrs. J. A. Paquette, San Mateo; and Mrs. Bernard A. Vallerga of Alameda.

SOUTHERN CALIFORNIA CHAPTER

The SC Chapter was hosted at the May meeting by the University of Southern California student chapter of the A.I.A.

The meeting was held on the USC Campus at the Town and Gown dining room.

APPOINTED GENERAL MANAGER OF KRAMER MANUFACTURING CO.

Charles C. Keller has been appointed general manager of the Kramer Manufacturing Company of San Francisco. He is a member of the American Hardware Manufacturers Association and served actively for many years and is well known in the hardware jobbing trade. He also served as vice president of the Farm Equipment Institute, and was formerly connected with the Empire Plow Co. of Cleveland as executive vice president and director. The company plans to enlarge its line of products under the guidance and experience of the new management which took over the organization earlier this year.

CHARLES C. KELLER

UNIVERSITY OF OREGON

(From page 11)

#5; Dick Campbell, Chairman, Team #6; Charles Dahlen, Chairman, Team #7; Neil Ledward, Chairman, Team #8; Bob Bosworth, Chairman, Team #9; and Bill Schuppell, Chairman, Team #10.

Each team worked as a group and was assigned definite basic functions and responsibilities in obtaining and analyzing data.

PROCEDURE

By the time of Mr. Cox's arrival on the campus, the student teams were at the stage of a developmental program where his special skills, techniques and experience could best be utilized. A seminar was conducted over a period of two days, with all students in attendance. The subjects considered and discussed were population research, highways, existing facilities, site circulation, utilities, etc. Mr. Cox then assisted the student groups in completing their preliminary analyses. Other conferences were held with the individual teams to discuss specific problems, many of which had to do with laying out the parking site, shopper circulation, store relationships within the groups, floor space, sales per square foot, rental percentages, merchandise display, mechanical features, construction ideas, and weak and strong design ideas for commercial purposes.

Separate conferences were held with the faculty so that close coordination could be obtained during the ensuing weeks. An interesting feature of the project was not only in the use of collaborative teams of architectural students but the development of closer relationship between landscape architectural students, urban planning, and interior groups. Each of these was given some responsibility in the detailed study of the program. All data collected by each team was made available to each of the other groups.

After this preliminary period of discussion, Mr. Cox left the campus while the students developed their projects in regular procedure. During this period of approximately seven weeks, his counsel was available by correspondence, and the faculty was always at hand to render assistance where possible and necessary.

THE CRITIQUE OR REVIEW

At the end of the eighth week, Mr. Cox returned to the campus and conducted a public critique, which is part of the normal procedure of the school. All students of the respective teams, as well as the faculty, participated. For those who are not aware of the methods used at the University of Oregon, all design work is accepted at the student's desk by the staff. Public critiques are conducted as part of the educational processes, rather than being used as "juries" for the purpose of setting up grade standards.

The work of the various teams was displayed on walls, and one at a time these presentations were analyzed in a constructive way to bring out weak points and emphasize strong ones. In addition, Mr. Cox presented a moving picture film of 25 minutes duration, together with 35 mm. Kodachrome slides showing the "good and the bad" of shopping center planning and operation. The moving picture film was set to sound with the narrator pointing out the highlights of what was shown on the screen.

As a result of the experience with this first project, it has been concluded that for future purposes at least one practicing architect and possibly more will be invited to participate in the clinic for the purpose of contributing ideas and comment on design as it would apply to commercial ventures of this sort. Generally, this architect can be from a local area or some not too remote metropolitan district, and one or more

would be invited to participate who had experience in the planning and layout of shopping centers.

THE FUTURE OF THE PROGRAM

This type of program was parallel with similar special studies carried on at the University of Oregon. It was the first time that a commercial venture of this size had ever been attempted as a problem. It is proposed to make this type of procedure an annual affair at the school.

It seems to be the consensus that this functional program combining design with economics and the practicalities of construction and merchandising has been a stimulant of great value to both students and faculty. Much good has come from the venture. It has been amazing and refreshing to see th especially intense interest displayed by all participants in the project.*

**BIBLIOGRAPHY: Architect and Engineer Magazine, July and August 1955; Transcripts and Statistical Data—Frank Emery Cox, Kawneer Co., Berkeley, Calif.; Baker—"Shopping Interest"; Ketchum—"Shops and Stores"; Nicholson—"Contemporary Shops"; Parnes—"Planning Stores That Pay"; National Committee on Housing, Inc.—"Planning Neighborhood Shopping Centers"; Urban Land Institute—Bulletins and Booklets.*

CALIFORNIA HORSE RANCH

(From page 24)

larger than normal; they have half-doors and face directly out onto the open paddocks. An overhang roof provides additional shelter for each stall. Each of the three wings of the barn are completely separate as a fire precaution and all inflammable materials are distantly removed from all areas where horses are stabled.

The stallion stables are similar to the broodmare barn wings in structure, but are located in a separate valley at considerable distance from the broodmare barns. In front of the stallion barns are paddocks used exclusively by the stallions, one to each stallion, and two hundred yards distant is the breeding pit.

Today, after three years of operation, Laguna Seca has grown to be the largest purely commercial thoroughbred breeding farm in the state with its first crop of California bred or foaled horses giving a creditable account of themselves wherever they have been raced to date.

Construction of the project was by Bishop, Younger, Bradley Company, general contractors, of San Francisco.

ARCHITECT ULYSSES FLOYD RIBLE REAPPOINTED TO STATE BOARD

Governor Goodwin J. Knight has reappointed Architect Ulysses Floyd Rible, A.I.A., partner in the firm of Allison and Rible, Los Angeles architects, to the California State Board of Architectural Examiners, with the new term to end January 15, 1959.

Rible, a past officer in the Southern California Chapter, A.I.A., is very active in architectural activities, his firm having designed many of the Southland's principal utility company buildings, leading colleges and universities, and numerous elementary schools and secondary schools, churches and governmental projects

PRISON ARCHITECTURE

(From page 13)

correctional institution "is" and does." These new institutions really should be called "schools" rather than penitentiaries or prisons, because the concept of a school and hospital is the basic one in modern penology.

Like other schools and hospitals, they should be specialized and their functions classified and shaped according to the kind of inmates they are handling. The design of the institution will be affected by all of the following factors:

The type of inmates to be provided for, their age groups, and the security necessary; the role this institution has in the over-all department facilities; the total size and location of the institution, acreage and kind of land available.

The answers to these questions will tell you:

1. What is needed in the rehabilitation program in the way of correcting physical, mental and moral defects. The emphasis needed in medical, dental, psy-

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chiatric, religious, educational and recreation facilities. Whether the institution is to be walled, fenced or without enclosures. Whether cells, dormitories, individual rooms or squad rooms will be used and if a combination of these is required. What will best be used in the work program whether dairying, beef raising or farming. Development of industrial aptitudes that will fit into community needs of employment.

CLASSIFICATION

Classification is the key to peaceful and productive handling of inmates. The institution should have adequate space and facilities to afford inmates the opportunity to learn and practice productive work, and to combat idleness. Idleness which breeds boredom, discontent and frustration, and impairs physical well being, is deadly poison to any program of rehabilitation.

The work facilities and the nature of the jobs should be carefully shaped to the kind of inmates, and designed for the maximum therapeutic value. The worth of such detailed planning as this pays off in results that are easily discernible. The institution must be shaped as specifically as possible to the inmates' needs and must offer a flexibility in further detail for personnel to treat each inmate individually, because each is different—a separate, different, individual human being. It is only by keeping this always in mind in designing the institution and the program of correction that we can successfully achieve so enormous a task as the remoulding we are attempting.

The American Correctional Association's statement of the aims of a good correctional program excellently outlines the principles which should guide all designers and administrators of penal institutions.

It says: "The essentials of a well-rounded correctional program must embrace: Scientific classification and assignment; adequate medical service, making full use of psychiatry; psychological services; employment at tasks with vocational training value; education planned in accordance with individual needs and interests; library services; directed recreation programs; religious programs; discipline aiming at development of self-control and preparation for free life; adequate buildings and equipment and above all, well trained personnel."

(To be concluded next month)

MALCOLM REYNOLDS APPOINTED TO CALIF. ARCHITECTURAL BOARD

Governor Goodwin J. Knight has appointed Malcolm D. Reynolds, A.I.A. architect of Oakland, partner in the firm of Reynolds & Chamberlain, to membership on the California State Board of Architectural Examiners, succeeding George P. Simonds, also of Oakland.

Reynolds is the immediate past president of the California Council of Architects, past president of the East Bay Chapter, A.I.A., and chairman of the Oakland Chamber of Commerce's construction industries committee.

NAMED MEDALIST

J. L. Stair, for many years associated with the Curtis Lighting, Inc., has been chosen to receive the 1955 Gold Medal of the Illuminating Engineering Society. The award will be made at the Society's Annual National Technical Conference to be held this fall in Cleveland.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

STANDARDS FOR A STRONG AMERICA. American Standards Association, 70 E. 45th St., New York 17. Price $3.00.

A 100-page volume representing the proceedings of the Fifth National Conference on Standards. Contains the answer to many questions being asked by the builder, the buyer, real estate representatives, architects and engineers, as answered by experts who appeared on the Conference program.

The book contains 40 pages on a wide range of subjects, including architecture, safety, quality control, color TV, purchasing, international standards and world trade, forecasts by technical and business press editors, agriculture, company standardization, and the 36th Annual Meeting and Award Ceremony addresses.

SUCCESSFUL FIREPLACES. How To Build Them. The Donley Brothers Co. 16th Edition. 13900 Miles Ave., Cleveland 5. Price .75.

The "Book of Successful Fireplaces and How to Build Them" points out the way for homeowners to pre-plan fireplaces for beauty and years of trouble free service.

Contains 80 large pages enriched with over 300 photographs, drawings, plans and other illustrations to help you select, plan or build the fireplace wanted. Shows modern, traditional, rustic corner, two-faced and three-way fireplaces and many other types and designs.

Discusses techniques of what size fireplace to build, what wood to burn, how to correct faulty fireplaces. Valuable information for anyone interested in or concerned with the building of a fireplace.

MOVING THE EARTH — The Work Book of Excavation. By Herbert L. Nichols, Jr. North Castle Books, 212 Bedford Road, Greenwich, Conn. Price $15.00.

This 1280 page, 1266 illustrations, volume is the first reference book covering the whole field of earthmoving. It is a comprehensive work, yet is non-technical and easy to read.

In two sections, the first covers "The Work" with chapters on clearing, rough surveying, soil and mud, cellars, ditching and drainage, ponds, landscaping, roads, blasting and tunneling, pits and financial management.

The second part "Machines" is a detailed discussion of practically every type of earthmoving equipment, covering construction, operation, and job application.

The book contains considerable material of value to architects, engineers, and contractors.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Interior planning. New brochure on interior planning; contains suggestions on 1) Planning; 2) Specifications; 3) Color and 4) Source and Installation; for architects, engineers, designers and their clients. For complete data write DEPT-A&E, K.I.P. Inc., 720 Montgomery Street, San Francisco 11.

Sliding glass doors and windows. A colored catalog (A.I.A. File No. 16-E) describing uses, sizes and types of steel-framed sliding glass doors and windows has just been released by Arcadia Metal Products. Technical specifications data; residential, schools, hospitals and commercial installations described in detail; also includes dimensions of glass required for various sizes, rough opening sizes and shipping weights. For free copy write DEPT-A&E, Arcadia Metal Products, P. O. Box 657, Arcadia, California.

Conventional and high velocity draftless air diffusers. A new special 64-page selection manual (A.I.A. File No. 30-J), containing over 100 illustrations showing installation, design and use of aspirating air diffusers and accessories is now available. Manual forms a complete guidebook to aspirating air diffusers for all purposes, and the special section on high velocity units will be of particular value to architects, consulting engi-

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neers, contractors, and others in the air conditioning field. Along with drawings, photographs and cut-a-way views of air diffusers, the manual offers tables and charts showing data on design and performance characteristics of air diffusers; full descriptions of each piece of equipment accompanied by specification table of different sizes available, and photograph of smoke tests demonstrate air distribution patterns. For copy write DEPT-A&E, Anemostst Corpn of America, 10 E 39th St., New York 16.

Panelfold doors. New brochure (A.I.A. File No. 16-M) on wood accordion-fold doors; shows freedom and flexibility in interior doors where space is an important factor; individual panels are hinged with a series of pantograph self-aligning, aluminum mounting units that provide for a smooth, even action; no floor guides, supported at top only, glide on nylon wheels and heavy brass bearings in an extruded aluminum overhead tract. Free copy write DEPT-A&E, Panelfold Doors, Inc., 430 - 5th St., Woodland, California.

Wrought iron pipe. New 52-page manual contains technical information most frequently required by architects, engineers, piping contractors, builders, and other specifiers of pipe and tubing. More than 25 separate tables list sizes and dimensional data of wrought iron pipe and tubular products; other tables record dimensions of pipe in fractions of an inch, decimals of a foot equivalent to inches and fractions of an inch, and decimal equivalents of fractions of an inch. Data is also provided about wire and sheet metal gauges, flow of water in gallons per minute and useful conversion factors. Supplementing the tables is information about wrought iron's physical characteristics and special properties, specifications of technical societies, mill standards, identifying markings and ordering procedure. Free copy write Engineering Service DEPT-A&E, A. M. Byers Co., Pittsburgh, Pa.

Oil warm air furnaces. New booklet describes modern, controlled warm air equipment that gives maximum heating comfort at the lowest price with minimum installation and operating cost; equipped with large, powerful but quiet blowers and fully insulated with aluminum foil glass wool, the furnace directs clean filtered air, heated to the correct temperature, exactly where and when it is needed. Complete information write DEPT-A&E, Firewel Co., Inc., 3685 Broadway, Buffalo 25, New York.

Pneumatic conveying systems. New catalog on three types of conveyors, vacuum, vacuum pressure and pressure systems, now available. Describes selection of proper type of unit for work to be done; gives conveying rate and distance to be conveyed. A number of illustrations gives examples of installations. Free copy write DEPT-A&E, Convair, Pittsburgh, Pa.

Architects Guide to Expressions in Wood. A new book, fully illustrated with photographs of wood carving designs for interiors of churches and institutions; provides descriptions of many designs in stock. Offers new ideas and suggestions for use of wood carving in interior building design. For free copy write DEPT-A&E, Acanthus Wood Carving Co., 732 N. Morgan, Chicago, Ill.

High pressure air transmission. New Bulletin (K-33) on line of high pressure diffusers or, more accurately, combination valves and reducing chambers; is virtually a textbook which undertakes to make available in one manual all current data on this essentially new and still advancing air distribution technique; of value to the air conditioning, heating and ventilating engineer; describes where high pressure air transmission may be used to advantage, engineering considerations, single and dual duct designs, typical layouts, velocity and pressure factors, duct sizing and construction, and sound control; numerous illustrations, charts and selection tables. Write DEPT-A&E, Connor Engineering Corpn, Danbury, Conn.

Valve booklet. A condensed Milvaco catalog of bronze valves for the plumbing and heating industry has just been released. This 8-page, two color publication covers 55 different types of valves in a wide variety of sizes. Listed with descriptions, sizes and weights are gate valves, angle valves, globe valves, check valves, manifold header units, foot valves, strainers, needle point valves, relief valves, and many others. An easy-to-select bulletin design lets the user see-at-a-glance the right type valve for any installation. For free copy write DEPT-A&E Walter Ellingboe, Milwaukee Valve Co., 2375 S. Burrell St., Milwaukee, Wisconsin.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

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8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00
Hollow Tile—	
12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

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Sisalkraft, reinforced, 500 ft. roll	B.50
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Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
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Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb	5.05
Asphalt roofing, 15-lbs	2.70
Asphalt roofing, 30-lbs	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

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Sash cord spot No. 7	3.65 per 100 ft.
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1-Ton lots, per 100 lbs	$3.75
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Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl.	3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.	
Cash discount on L.C.L.	2%
Trinity White, Medusa White, Calaveras White	1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.62

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
⅝ x 2¼	390.00	381.00
⅝ x 2¾	375.00	355.00
⅝ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

⅝ x 2¼ First Grade	$390 00
⅝ x 2¼ 2nd Grade	365.00
⅝ x 2¼ 2nd & Btr. Grade	375.00
⅝ x 2¼ 3rd Grade	240.00
⅝ x 3¼ 3rd & Btr. Jtd. EM	380.00
⅝ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
7/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
7/32 in. Heat Abording Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
7/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
7/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—

Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.

¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—

(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	Pr. per pkg.	Price to Painters Per 100 lbs.	Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored 12 x 12, each	F.O.B. S. F.
	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—

8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—

12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2 3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(96)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 9: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: NIles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

LOCKER ROOM, High School, Coalinga, Fresno county. Coalinga Union High School District, Coalinga, owner. 1-Story addition to the girls gymnasium, reinforced concrete and frame construction, tile, showers — $72,800. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Remco Constn Co., Avenal.

SOUTHERN NEVADA MEMORIAL HOSPITAL, Las Vegas. Clark County Board of Commissioners, Las Vegas, owner. 3-Story wing addition to Southern Nevada Memorial hospital; demolition, earthwork, reinforcing and structural steel, concrete, sheet metal, plastering, thermal insulation, asphalt tile, painting, tile, linoleum, Venetian blinds, elevators, plumbing, air conditioning—$666,375. ARCHITECT: Zick & Sharp, Las Vegas. GENERAL CONTRACTOR: Lembke-Clough & King, Las Vegas.

OFFICE & WAREHOUSE, Novato, Marin county. North Marin County Water District, Novato, owner. 1-Story concrete block and frame and brick veneer construction; 5300 sq. ft.—$53,358. ARCHITECT: Lloyd A. Rasmussen, San Francisco. GENERAL CONTRACTOR: Jack W. Shields, Novato.

ELEMENTARY SCHOOL, Sparks, Nevada. Sparks School District, Sparks, owner. Reinforced concrete block, laminated wood rafters, steel sash, acoustical ceilings, insulation; 10-classrooms, administration rooms, kindergarten, kitchen, multi-purpose rooms, toilet rooms — $204,135. ARCHITECT: Russell Mills, Reno. GENERAL CONTRACTOR: J. C. Dillard, Reno, Nevada.

AIRMEN'S SERVICE CLUB, Stead Air Force Base, Reno, Nevada, Corps of Engineers, San Francisco, owner. 1-Story concrete block construction with wood frame, wood roof, utilities, paving — $182,190. GENERAL CONTRACTOR: McKenzie Constn Co., Reno, Nevada.

AUTO SALES & SERVICE, Los Altos, Santa Clara county. Hatch Chevrolet, owner. 1-Story concrete block, structural steel beams in show room, wood roof trusses, plate glass front; 90x175 feet — $76,490. ARCHITECT: Leonard H. Ford, Walnut Creek. GENERAL CONTRACTOR: DON GORDON, Los Altos.

ELEMENTARY & HIGH SCHOOL, Alpaugh, Tulare county. Alpaugh Unified School District, Alpaugh, owner. Frame

and stucco, structural steel bents, concrete floors, plywood interiors, laminated roof deck, unit ventilating; 4-classrooms, kindergarten, multi-purpose room, kitchen, commercial rooms, science, homemaking, shops, toilet rooms and remodel existing shops and gymnasium — $403,450. ARCHITECT: Horn & Mortland, Fresno. GENERAL CONTRACTOR: Remco Constn Co., Avenal.

MARKET, West Covina, Los Angeles county. Alpha Beta Markets, Covina, owner. Reinforced brick, tapered steel girders, composition roofing, concrete slab and asphalt tile floors, drywall, central forced air heating and refrigeration, plate glass entrance doors with automatic openers, thermal insulation, toilets, ceramic tile, metal toilet partitions, electrical work, asphalt paving; 160x146 feet — $169,596. ENGINEER: George Novikoff, Los Angeles. GENERAL CONTRACTOR: Carpenter & Smallwood, Los Angeles.

SUPER MARKET, Lodi, San Joaquin county. Thomas Hom and Soow Lee, owners. 2-Story concrete block, brick veneer, frame construction, including 10 sleeping rooms, dining room and kitchen; 20,000 sq. ft. floor area — $125,900. ARCHITECT: Wallace J. Alexander, Sacramento. GENERAL CONTRACTOR: Craft Constn Co., Stockton.

ELEMENTARY SCHOOL, Torrance, Los Angeles county. Torrance Unified School District, Torrance, owner. New elementary school of 16-classrooms in four wings, double kindergarten unit, multi-purpose building and administration building, tilt-up construction, steel sash, built-up gravel roofing, ashpalt tile, ceramic tile and two forced air heating units in each room — $361,955. ARCHITECT: Wilbur C. Harrison and Quinton Engineers, Ltd., Los Angeles.

SHOPPING CENTER, near Sacramento. Rancho Cordova Shopping Center, Sacramento, owner. Two buildings each 64x 160 ft., frame and stucco construction, shake roof, concrete floors — $160,000. ARCHITECT: Rickey & Brooks, Sacramento. GENERAL CONTRACTOR: Jacobson Constn Co., Sacramento.

SCHOOL AUDITORIUM, Burbank Jr. High School, Berkeley, Alameda county.

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	43.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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BUILDERS! You can make more money; get information you need before it is published elsewhere; Subscribe to the daily ARCHITECTS REPORTS, only $10.00 per month. Complete information from ARCHITECTS REPORTS, 68 Post Street, San Francisco. Phone DOuglas 2-8311.

MAYNARD DIXON MURALS—signed and dated 1935. Two, oil on canvas, about 7 feet 10 inches x 15 feet 5 inches and 7 feet 11 inches x 17 feet 10 inches. Mountains and mounted figures. Edward C. Washer, 628 Montgomery St., San Francisco 11, GArfield 1-8427.

COLLECTIONS—Thoroughly experienced in all phases of the collection business; your interests protected at all times; bonded agents everywhere; no collection charge; California Material Dealers Service Co., 925 Hearst Bldg., San Francisco. Ernest T. Langley, Manager.

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SAND BLASTING EQUIPMENT and sand: Painters scaffolding, compressors rented, etc. Call JACK SMITH for prices. Smith Industrial Supply Co., 395 Irwin St., San Francisco. Phone UNderhill 1-2861.

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SCHOOL EQUIPMENT — Drawing tables, easel tables, office desks, file cabinets plus children's furniture and school equipment, art supplies and educational toys in stock; free exchange of information and experience on children's problems and development. School Equipment Co., 1818 Market St., San Francisco. New & Used equipment — lot bids made.

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Berkeley Unified School District, Berkeley, owner. Reinforced concrete and steel construction — $328,950. ARCHITECT: Warnecke & Warnecke, Oakland. GENERAL CONTRACTOR: Swinerton & Walberg, Oakland.

SHOP BLDG, High School, Dos Palos, Merced county. Dos Palos Joint Union High School District, Dos Palos, owner. Frame and stucco construction: woodworking, metal and drawing room facilities — $113,801. ARCHITECT: Falk & Booth, San Francisco. GENERAL CONTRACTOR: Clarence Ward Const. Co, Fresno.

BANK BLDG., Pittsburg, Contra Costa county. Anglo-California National Bank, San Francisco, owner. 1-Story, with mezzanine, reinforced concrete and frame construction — $196,921. ARCHITECT: J. Francis Ward, San Francisco. GENERAL CONTRACTOR: Stolte Inc., Oakland.

BATH HOUSE & SWIMMING POOL, High School, Alameda. City of Alameda, owner. Reinforced concrete pool, 42x75 ft.; Bath House building, radial heating—$96,748. ARCHITECT: L. F. Richards, Santa Clara. GENERAL CONTRACTOR: Frank Mossey, Alameda.

BREWERY BLDG, Van Nuys, Los Angeles county. Schlitz Brewing Co, Milwaukee, Wisc, owner. Reinforced brick administration building, composition and wood roofing, caisson work, concrete slab, terrazzo, vinyl, carpeted, mosaic tile and marble floor covering, air conditioning, wood paneling, insulation, plate glass, offices, laboratories, kitchen area, stainless steel equipment, stone veneer, asphalt paving. ARCHITECT: Leo P. Raffaelli, Studio City. GENERAL CONTRACTOR: George O. Chapman, Van Nuys.

SHOPPING CENTER, Monterey Park, Los Angeles county. Atlantic Associates Inc., Monterey Park, owner. Shopping center will include a 2-story building for J. C. Penney Co., a 1-story building for J. J. Newberry Co., and seven store units; tilt-up concrete wall construction, structural steel, composition roofing, slab floors, interior plastering, acoustical work, plate glass, steel sash, air conditioning, paving, curbs and fencing. ARCHITECT: H. L. Gogerty, Los Angeles. GENERAL CONTRACTOR: Oltmans Constn Co., Monterey Park.

DORMITORIES & GROUND IMPROVEMENTS, Preston School of Industry, Ione, Amador county. State of California, Sacramento, owner. Site grading, plant mix concrete walks, gutters, planting; miscellaneous and electrical work. ARCHITECT: Anson Boyd, State Architect, Sacramento. GENERAL CONTRACTOR: Stephen L. Vistica, San Mateo.

CEREBRAL PALSY SCHOOL, Sunset School, San Lorenzo, Alameda county. San Lorenzo Elementary School District, San Lorenzo, owner. Administration and 4-classroom; physio-therapy, occupational therapy, speech room, brace room, kitchen, bus shelter, bath and toilet rooms — $153,841. ARCHITECT: Schmidts & Hardman, Berkeley. GENERAL CONTRACTOR: Western Empire Constn Co, Los Altos.

WAREHOUSE, Los Angeles. Harry Turken, Los Angeles, owner. Brick warehouse, composition roof, concrete and asphalt tile floors, interior plaster work, acoustic tile ceilings, dual gas wall heaters, 20-gallon gas water heater, toilets, rotary roof ventilators, wood overhead doors, steel sash — $70,000. ENGINEER: Richard R. Bradshaw, Los Angeles. GENERAL CONTRACTOR: Sapp Bros, Los Angeles.

SUPER MARKET, Ceres, Stanislaus county. Frank Chong, Ceres, owner. 1-Story, concrete block and frame construction: 9,200 sq.ft. floor area — $70,963. ENGINEER: Homer Jorgenson, Fresno. GENERAL CONTRACTOR: L. M. Smith, Turlock.

GENERATOR PLANT, Berkeley, Alameda county. Glidden Company, Berkeley, owner. Pre-fab building: compressors, tanks, piping — $155,000. ENGINEER: W. F. H. Schultz, Inc, Atlanta, Ga. GENERAL CONTRACTOR: Same.

FISH HATCHERY, Nimbus, Sacramento county. U. S. Bureau of Reclamation, Folsom, owner. Fish hatchery building 80x100 ft.; Office building, 40x40 ft.; Processing building 40x100 ft.; Pre-fab metal construction, refrigeration system, water pressure system, fish troughs in hatcher, fish holding, nursery and rearing ponds, culverts, piping, steel pipe, water system, surfacing — $457,852. GENERAL CONTRACTOR: Johnson, Drake & Piper, San Leandro.

UNDERGROUND STEAM LINES, Stanford University, Santa Clara county. Board of Trustees, Stanford University, Palo Alto, owner. Underground system of steam lines — $59,900. ARCHITECT: Ambrose & Spencer, San Francisco. GENERAL CONTRACTOR: Scott Co., San Francisco.

CHURCH, Beverly Hills, Los Angeles county. Mt. Calvary Lutheran Church, Beverly Hills, owner. Frame and stucco and brick veneer: basement with recreation facilities, 70-ft. reinforced gunite tower, composition roofing, concrete slab, asphalt tile, linoleum, plywood and rubber tile floors; plaster, acoustic plaster, acoustic tile, class B fire doors, slim line lighting, steel trusses, kitchen, dishwasher, garbage disposal, forced air heating, hardwood pews; 9609 sq.ft. floor area, 500-600 persons capacity. ARCHITECT: H. O. Alden, Beverly Hills. GENERAL CONTRACTOR: Questad Constrn Co., Tarzana.

SWIMMING POOL & BATH HOUSE, Crows Landing, Stanislaus county. Bonita Elementary School District, Crows Landing, owner. Swimming pool 30x85 ft., gunite construction; bath house 16x52 ft., concrete block and frame construction—$25,733. ARCHITECT: Kaestner & Kaestner, Modesto. GENERAL CONTRACTOR: Jesse E. Wagner, Modesto.

MEMORIAL HALL, Livingston, Merced county. County Board of Supervisors, Merced, owner. 1-Story concrete block and frame construction — $19,500. GENERAL CONTRACTOR: Arden Hutchings, Merced.

LIBRARY, Santa Clara. City of Santa Clara, owner. 1-Story frame construction — $87,626. ARCHITECT: Higgins & Root, San Jose. GENERAL CONTRACTOR: Morrison W. Reese.

PORTABLE CLASSROOMS, Modesto. Stanislaus county. Modesto Unified School District, owner. 28-Portable classroom buildings of frame construction for various schools — $235,000. ARCHITECT: Harry I. Devine, Sacramento. GENERAL CONTRACTOR: Harris Constn Co. Fresno.

HANGER, Ontario. Lockheed Aircraft Service Co, Ontario International Airport, Ontario, owner. All-steel, 193x234 ft. in area — $400,000. ARCHITECT: George V. Russell, Los Angeles. GENERAL CONTRACTOR: Pozzo Constn. Co, and Mutual Steel Constrn, Inc., Los Angeles.

NEWSPAPER PLANT TO CHURCH, Santa Monica. Los Angeles county. Unity-by-the-Sea, Inc., Santa Monica, owner. Reinforced concrete building, 12,750 sq. ft.

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floor area; suspended acoustic ceilings, asphalt tile, new slab on first floor, automatic fire sprinklers, plumbing, electrical work, ventilating system, accordian partitions, ceramic tile, aluminum entrance doors, ARCHITECT: Ben Hayne, Santa Monica. GENERAL CONTRACTOR: K. B. Wamsley, Santa Monica.

SWIMMING POOL & BATH HOUSE, Washington Park, Sunnyvale, Santa Clara county. City of Sunnyvale, owner. Reinforced concrete swimming pool and bathhouse buildings, steel bleachers — $123,216. ARCHITECT: L. F. Richards, Santa Clara. GENERAL CONTRACTOR: Bridges Constn Co., San Jose.

JUVENILE DETENTION HOME, County Hospital, Auburn, Placer county. County of Placer, Auburn, owner. Precast concrete panels, 5000 sq. ft. in area—$99,328. ARCHITECT: Franceschi & Mullen, Sacramento. GENERAL CONTRACTOR: Don Da Roza, Inc., Dutch Flat.

IN THE NEWS

UNIVERSITY DORMITORY

Architects Binder & Curtis of San Jose are completing drawings for construction of a 3-story, plus basement, dormitory building on the University of Santa Clara campus in Santa Clara.

The building will be of reinforced concrete construction and 45x190 ft. in area.

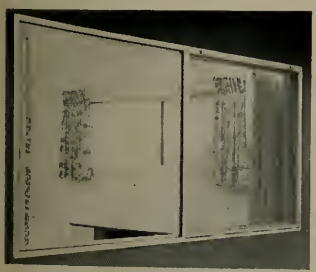
ARCHITECT SELECTED

The Millbrae Elementary School District of Millbrae, San Mateo county, has commissioned the architectural firm of Falk & Booth of San Francisco, to design a new Elementary School building to be built on the Mills Estate realty development.

The new school will comprise five classrooms, kindergarten, toilet rooms, and other educational facilities.

NEW ARISLIDE ALUMINUM SLIDING WINDOWS ANNOUNCED

The new Arislide aluminum sliding window provides important advantages for architects, builders and home owners. All sizes have nail-in anchor fins which eliminate the need for wood surrounds or frames, with a consequent reduction in installation costs. Nail holes in the fins allow windows to be nailed directly into studs.



Nylon bottom rollers provide smooth, quiet operation. Mechanical joints give complete rigidity. The windows are weatherstripped on all four sides with double weather-stripping at the head.

Nine stock sizes are available. Windows can be shipped fully assembled or knocked down for freight saving. Recent catalog gives complete data. Write Michel & Pfeffer Iron Works, Inc., 212 Shaw Road, South San Francisco.

HAWS ANNOUNCES NEW DRINKING FOUNTAIN

Combining extreme ruggedness with conformity to modern architectural trends, this new drinking fountain, designed by Channing Wallace Gibson, famed industrial designer, is adaptable for either school or general purpose installation.

Free from dirt catching corners, Model No. 7Z, is constructed of acid-resisting enameled cast iron to insure permanent, trouble free operation and to withstand the severest abuses; meets all requirements of any city or state materials specifications codes; has positive antisquirt, automatic stream control. Complete specifications from Haws Drinking Faucet Co., Berkeley, California.

GYMNASIUM ADDITION

Architect C. B. Alford and W. J. Thomas of Bakersfield, have completed plans for construction of an addition to the Boy's Gymnasium at the Wasco High School, for the Wasco Union High School District of Wasco.

Of concrete block construction the new building will contain 2000 sq.ft. of area; locker room, toilet room and shower room.

SCHOOL PLANS COMPLETED

Architect William G. Merchant, San Francisco, has completed plans and specifications for construction of the new Lick-

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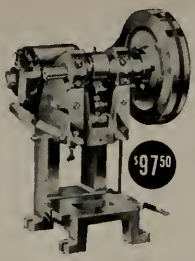

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Wilmerding School in San Francisco.

The new building will comprise administration, classrooms, science and drawing rooms, library, cafeteria in a two story structure; and two one story shop buildings. Estimated cost is $500,000.

WILLIAM H. CURTISS, JR. NAMED SALES MANAGER

William H. Curtiss, Jr., has been appointed General Sales Manager of the Pacific Coast Division of Owens-Corning Fiberglas Corpn., according to an announcement by L. R. Kessler, vice-president and division general manager.

The Pacific Coast Division, with headquarters in Santa Clara, serves an 11-state west coast area, including California, Oregon, Washington, Colorado, Arizona, New Mexico, Utah, Idaho, Montana, Nevada and Wyoming as well as Alaska and Hawaii.

ARCHITECT LICENSED

Urban Ernst of Stockton, recently received his license to practice architecture in the State of California. He is the son of the late Elmore Ernst, designer of many buildings in the San Francisco bay area.

Ernst is associated in the firm of John E. Lloyd.

ARCADIA METAL NEW PLANT

A. Quincy Jones and Frederick E. Emmons, A.I.A., Architects of Los Angeles, have completed drawings for construction of a new factory for the Arcadia Metal Products to be built in Fullerton.

The new facilities will comprise 50,000 sq.ft. of floor area on a 10 acre site. All offices along the perimeter of the building will open into garden terraces and the office area is designed on a 10-foot module; slab type roof is supported on steel posts. The factory will be built of tilt-up concrete wall panels with poured-in-place concrete columns.

SQUARE CORNERED SWITCH BOXES BY KEYSTONE

A complete new line of square cornered sectional switch boxes designed to speed installation time and lower labor costs is announced by Keystone Mfg. Company.

Available in standard types, boxes feature clamps with nested fit for quick, easy wire pulling, knockouts and pri-outs specially designed for duble quick removal, and 1-screw adjustment of channel reinforced plaster ear which permits adjustment from 0" to ¾". Sectional boxes feature optional "leveling bumps" assuring alignment with studding when side mounted; smooth, embossed ridges for cable rests; lanced nailing points on mounting brackets. Catalog — Keystone Mfg. Co., 23328 Sherwood Ave., Center Line, Detroit, Mich.

ELEMENTARY SCHOOL

Architects Kaestner & Kaestner of Modesto, have completed drawings for construction of a new Elementary School near Placerville for the Mother Lodge Union Elementary School District.

The new building will provide facilities for ten classrooms, kindergarten, administration, multi-purpose, kitchen and toilet rooms.

MEDICAL BUILDING

Architect Sam Reisbord, Los Angeles, is completing plans for construction of a 2-story, brick masonry, medical building in

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the San Fernando Valley which will contain 23,000 sq.ft. of floor area.

The building will be of structural steel, composition roofing, concrete slab, asphalt tile and wood floors, hardwood paneling, elevator, metal sash and air conditioning.

POULTRY AND FISH MARKET

Architect Sam Reisbord of Los Angeles is completing plans for construction of a masonry poultry and fish market in the Van Nuys district. The market will contain 3200 sq.ft. of area.

MORTUARY BUILDING

Architect Clayton Kantz of Redding is completing working drawings for construction of a new Mortuary in the city of Redding for owner Theodore McDonald.

The building will be 1 and 2-story construction of structural steel, steel frame, wood and stone exterior. Estimated cost is $200,000.

ARCHITECT SELECTED

Architects De Longchamps & O'Brien of Reno, Nevada, have been commissioned by the University of Nevada to draft plans and specifications for remodeling Manzanita Hall on the University campus. Estimated cost of the project is $200,000.

INDEPENDENT IRON WORKS PROMOTES

The Independent Iron Works, Inc. of Oakland, through the firm's president Wm. G. Meagher, announced the appointment to vice-president of the company the following:

James F. Meagher, general manager; William Mason, plant manager; David R. Meagher, chief engineer; William G. Meagher, Jr., sales manager; and John A. Tompkins, treasurer and controller.

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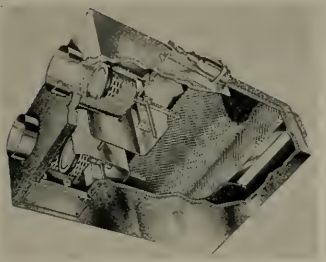
Temperature and volume are controlled separately in this new Connor Engineering Corpn dual duct high pressure air diffuser. Total air delivery, once established, remains uniform under all operating conditions. Temperature is varied by mixing hot and cold air quantities.



Both air inlets fitted with dampers. The two outer sleeves slide back and forth over fixed inner sleeves, governing the size of holes through which air flows; both sleeves are moved simultaneously by thermostat-actuated motor. Made in capacities up to 1000 c.f.m., opearting at static pressures up to 6", water gauge. Complete data from Connor Engineering Corpn, Danbury, Conn.

ARCHITECT SELECTED

Architects Kress, Goudie & Kress of San Jose have been commissioned by the East-side Union High School District of Santa Clara county, to draft plans and specifications for construction of a new high school near San Jose.

School bonds have been issued and sold for the project which will cost an estimated $1,955,000.

DREW SCHROEDER NAMED POMONA TILE PRESIDENT

Drew Schroeder, executive vice president of the Pomona Tile Company, Pomona, California, has been selected president of the firm succeeding R. J. Schroeder who has been named chairman of the board.

Schroeder, affiliated with Pomona Tile Company since 1941, served as National Chairman of the Tile Council of America in 1950, and for the past three years has

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The first cylindrical lock, featuring both trim and lock mechanisms constructed entirely of stainless steel and guaranteed for lifetime durability and maximum resistance to corrosion, has been announced by the Schlage Lock Company of San Francisco.

Successful manufacture of stainless steel for lock mechanisms and trim is regarded as revolutionary advance in lock manufacturing; has greater durability with plus characteristics of non-tarnishing and corrosion resistance. Is constructed of wrought stainless steel with stainless steel reinforcement; available in sparkling bright or soft brushed finish. Complete data Schlage Lock Co., 2201 Bayshore Blvd., San Francisco.

ARCHITECT SELECTED

Architects Ponsford & Price of Oakland, have been commissioned by the City of Oakland, Recreation Department, to draft plans and specifications for construction of a new Recreation Building in the Arroyzo Viegjo Recreational Center in Alameda county.

Estimated cost of the new building is $125,000.

MEDICAL BLDG

Architect Jacob Tracht of Los Angeles, has started working drawings for construction of a frame and stucco industrial Medical Building in the City of Gardena, for the Flamingo Investment Corpn.

The building will contain 4,000 sq.ft. of floor area; composition roof; concrete slab and asphalt tile floors, plaster walls, acoustical plaster ceilings, metal sash, forced air heating and cooling, X-ray equipment and pharmacy.

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COVER PICTURE

BERKELEY HIGH SCHOOL AUDITORIUM
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Distinctive architectural design is this modern high school auditorium, built for the City of Berkeley, as part of 'Forty-One Years" of business in the construction industry by Dinwiddie Construction Company.

For additional pictures and a story on this great Western building firm, see Page 13.

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ARCHITECT AND ENGINEER

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135. — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c.

. EDITORIAL NOTES .

GOVERNMENT REFORM

Hoover Commission recommendations on improving the executive branch of the Federal Government have been sent to members of the U. S. Congress for consideration. But the battle against the appalling waste and inefficiency disclosed in the Hoover reports will not be won in Washington. It will be won in the rural areas, on the "mainstreets," in the industrial cities.

It will be won through the leadership of groups of businessmen, civic organizations, and professional groups. It will be won by their efforts in disseminating the facts, awakening public opinion, organizing taxpayers, and in focusing the resultant demands on Congress.

This tremendous effort will be in face of heavy odds, as many perceptive observers fear that the irresponsible growth of statism can not be stopped. But, it must be stopped for the alternative is the death of freedom.

Businessmen do not have to be told of the consequences of government which transcends legitimate functions. They have witnessed these consequences in their taxes, regulation of their business, and in more subtle harm to the human spirit.

You can do your part towards protecting Freedom, by becoming familiar with the facts and recommendations of the Hoover reports; participate in the programs and activities of your Chamber of Commerce and the Citizens Committee for the Hoover Report; pass constructive information along to your employees, friends, and associates; and extremely important, you can let your Congressional delegation know of your effort by writing them a letter. Soundly-reasoned letters are one of the chief means by which members of Congress determine sentiment back home.

* * *

Indications are that the construction industry will show a 7% improvement in 1955 over 1954 and 1954 was the highest year in history for that industry.

* * *

HOMES FOR KOREA

The Private Enterprise answer to communism is an approved project of the American Korean Foundation, which has made a substantial appropriation to get the project started, to teach the Koreans to mass produce houses, of which they are in great need, due to their war losses.

It is more, however, than a Pilot Project for Korean Housing. It is also a Pilot Project in putting the active support of an entire American industry back of a corresponding industry in Korea. It is the Private Enterprise response to the challenge of the international "Disaster Area."

The American Korean Foundation has the strongest possible support from the President of the United States and the highest degree of cooperation from the President of Korea. Both on the grounds of humanity and of self interest, there is America-wide support for a well planned program to help the Koreans help themselves. A vital tenet of the free enterprise system is that those who have disproportionately suffered must be correspondingly helped by others. A battleground for over three years, Korea is now the first line in Asia in the war of private enterprise against communism. Korea has to make good under the private enterprise system, our system, if all Asia is to believe that our system is better.

There is no need for any new organization in the Building Industry to support the "Homes for Korea" project by providing the needed material and money. All that is needed is to place the "Homes for Korea" project squarely before members of the American building industry and they will respond in such a manner as to give a resounding answer to the threat of communism against a suffering people.

* * *

"Poor vocational guidance keeps many young people from taking advantage of numerous opportunities to become skilled workers and technicians": National Manpower Council.

* * *

A DREAM COME TRUE

A dream, a vision of far-reaching consequence to the Home Building Industry and the home buyers of the nation will become a reality this month, when the National Association of Home Builders moves into its new headquarters in the top two floors of the National Housing Center, recently completed in Washington, D. C.

The National Housing Center is a modern, specially designed, eight-story building and in mid-August the formal public opening will spotlight for both public and industry visitors the finest exhibit of building materials and equipment in the world. This great institution, of striking modern design, will provide services to the industry and the public never before available in this country.

Located in the heart of Washington's fastest growing business section, it is four blocks from the White House and mid-way between two of Washington's leading hotels. Thus, its convenient location will make it easy for thousands of people to visit the Center annually.

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NEWS and COMMENT ON ART

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, will present an exhibition of paintings by Frances Baldwin, Bernique Longley, and Ray Strong during June and through July 11.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., will present a number of special exhibitions and events for June.

EXHIBITIONS: High Style and Chinese Art, representing a 4000 year survey of Chinese Art in relation to contemporary ideas of elegance; Paintings by Henry Koerner; Jewelry by Peter Macchiarini; and Paintings by John Emmett Gerrity.

The Achenbach Foundation for Graphic Arts will exhibit (at the Museum) East Meets West—Influence in Japanese printmaking; and on loan exhibition at the San Francisco Public Library, Prints Commemorating United Nations week, and Early San Francisco.

SPECIAL EVENTS: Organ-Orchestra Concert each Sunday afternoon at 3 o'clock. Educational Activities in Summer Painting classes for Children will start July 12th and be held on Tuesdays and Thursdays. An introductory class for adults desiring instruc-

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park, San Francisco

STIRRUP-SPOUT Vessel of the Middle Mochica Culture (200-400 A.D.)

From the Nathan Cummings Collection of Pre-Columbian Peruvian Ceramics on Display at the M. H. deYoung Memorial Museum, through June.

tion in contemporary approaches to painting will be held on Saturdays at 2 p.m. beginning July 16.

The Museum is open daily, 10 a.m. to 5 p.m., Holidays 1 p.m. to 5 p.m.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, San Francisco, under the direction of Dr. Grace L. McCann Morley, is offering the following schedule of events for June:

EXHIBITIONS: Art in the 20th Century; We the People; Bay Region Painting and Sculpture, an exhibition selected by the Boards of the San Francisco Museum of Art; Ceramics by Tyra Lundgren, famous in her native Sweden for a number of commissions to decorate official buildings; The Neuberger Collection; Canadian Eskimo Sculpture; and Three Contemporary Sculptors, Reg. Butler (United Kingdom), Berto Lardera (Italy), and David Simth (U.S.A.).

SPECIAL EVENTS: In association with Mills College, the New Music Quartet will be presented each Tuesday evening at 8:30; Lecture Tours are conducted each Sunday afternoon at 3 o'clock; and on Wednesday evenings Gallery Tours are conducted at 8 o'clock. The Studio Art for the Layman, Adventures in Drawing and Painting, and the Children's Saturday Morning Art Classes will recess for the summer, to be resumed in September.

The Museum is open daily.

FAMOUS SWEDISH SCULPTRESS EXHIBITS IN SAN FRANCISCO

Tyra Lundgren, famous in her native Sweden for a number of commissions to decorate official buildings, is having her first exhibition in this area in the current showing of her ceramic sculpture at the San Francisco Museum of Art. Included are examples of the tiles of high relief texture, strongly marked designs in earth color glazes typical of the mural work for which she has gained recognition in Sweden. There are also ceramics of birds, fishes and flowers in ironstone and high fired clay.

Mrs. Tyra Lundgren is Sweden's outstanding ceramic sculptress. She is also a painter and a textile artist. Her works include sculptures of the Chilian authoress and Nobel Prize winner Gabriella Mistral, of Selma Lagerlof, the famous novelist, and of Marta Maas, the noted textile designer. In Sweden she is mostly known for her beautiful ceramics of birds, fishes and flowers. She has had many commissions to decorate official buildings in Sweden. One of her latest works is a relief, 15 feet high, in a power plant in Northern Sweden, depicting the saga of the waterfall from ancient times.

She has studied at the Royal Academy of Arts in Stockholm. She also studied in Vienna, Italy and Paris.

Her stoneware has been exhibited in most European countries, the U.S.A. and Canada, and during February and March of this year the Palacio de Bellas Artes in Mexico City had an exhibit of her more recent works, now on display at the San Francisco Museum of Art. It was enthusiastically reviewed by the Mexican art critics.

Many of the pieces being shown in the current exhibition, done recently, are being shown in this country for the first time.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is presenting a number of special exhibitions during June, including:

EXHIBITIONS: "My Memoirs," paintings by Cosmy; Thirteen Water-colorists, 20th Annual; European Impressions, Paintings and drawings by Antonio Sotomayor; Ancient Peruvian Art, from the Nathan Cummings Collection, and Contemporary Industrial Arts of Fourteen Countries, with primary emphasis on home furnishings and fabrics. Australia, Belgium, Canada, Denmark, France, Germany, India, Italy, Japan, The Netherlands, Norway, Pakistan, Sweden, and the United Kingdom are the participating nations.

SPECIAL EVENTS: Seminars in the History of Art, Thursdays 10:30 to 11:30 a.m.; Painting exercises for beginners, Saturdays 10:30 a.m.; and Painting Workshop for Amateurs, Thursday and Saturday afternoons 1:30 to 4 o'clock. Classes in the Enjoyment of Art for Adults and Painting Classes for Children will recess for June but will be resumed early in July.

The Museum is open daily 10 a.m. to 5 p.m.

SUMMER ART CLASSES SCHEDULED BY deYOUNG

The summer schedule of free art classes for adults and children at the M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, includes a new class for adults, "Painting Exercises for Beginners," a series of elementary experiments in painting in oil, to be conducted by Charles Lindstrom, Saturday morning from 10:30 to noon beginning June 11. Two other adult classes will be resumed June 10 after a week's recess, "Seminars in the History of Art" Thursday mornings from 10:30 to 11:30, and "Painting Workshop for Amateurs" painting from the model and still life motifs, Thursday and Saturday afternoons from 1:30 to 4:00.

All children's art classes conducted by Miriam Lindstrom will recess for the month of June.

BUILDING WITH THE WEST

TECHNICALLY SPEAKING

WOODWORK INSTITUTE OF CALIFORNIA

THE SPECIFICATION OF HARDWOOD FOR ARCHITECTURAL MILLWORK

By LES HARTER, Technical Consultant, Woodwork Institute of California

Architectural Millwork, to include paneling, cabinet work, stairs, and interior finish, is always subject to specification and detail by the architect. When the material to be used is hardwood, the designation of material quality and description has always been particularly difficult. The segregation of factory lumber into grades at the sawmill is based on the proportion of each board that, upon being sawed and ripped, will yield cuttings of various specified qualities and sizes. The system of grading as established by the National Lumber Manufacturer's Association takes into account only the inherent natural characteristics of lumber, such as wane, knots, splits, decay, etc. These commercial grading rules do not define the natural characteristics of hardwood which affect texture, fineness or evenness of grain, hardness, finishing qualities, working qualities, or other factors that influence the beauty or utility or architectural effects offered by hardwoods of clear quality.

It is true that in a few species, grading rules do take into account variations in color between sapwood and heartwood. Notable examples are "white birch" and "red birch," "red gum" and "sap gum," "sap poplar" and "yellow poplar," "red beech" as opposed to unselect beech, and some others. However, the architect must consider a number of factors besides quality in its strictest sense, if he is to make certain that he controls the kind and character of hardwood that is to be used in architectural millwork.

In all instances, it is reasonable to require the manufacturer to submit for approval adequate representative samples of the materials he proposes to use. This is especially true where the various interior items may be furnished by several subcontractors. It is suggested that the sub-contractor with the largest proportion of the total work to be done might furnish sufficient samples for each other sub-contractor to have a specimen of the kind and quality of wood desired.

In the specifications, the various items must be described in detail as to whether they are to be of solid wood or veneers on plywood, and the character of the grain figure, the kind of grain, the color, and the method of matching must be shown.

It is emphasized that detailed specifications as to pattern, quality, size and character of the figure, grain, and matching for solid wood parts and parts that are to be face veneered are different. These detailed specifications must therefore be prepared separately. In order to make certain that the minimum requirements for specifications are met, the following outline is submitted, divided into the necessary two parts. The proper designation must be included for each item in each part.

SOLID WOOD SPECIFICATION DATA

(Solid wood is taken to mean sawn and dressed or especially milled lumber, usually ⅜" thick or thicker.)

1. Kind of wood (proper species designation and specific kind of species).
2. Method of manufacture (plain-sawn, quarter-sawn, comb grain).
3. Color (heartwood, sapwood, unselect for color).
4. Grain and texture (fine, coarse, straight grain, comb grain).
5. Special grain figure or marking (birdseye, curly, worm holes, knotty, etc.).

VENEER AND PLYWOOD SPECIFICATION DATA

(Face veneers only are considered, since commercial veneers such as cross banding, backing, core stock, and such are of no great concern to the architect.)

1. Kind of face veneer (proper species designation and specific kind of species).
2. Method of manufacture (sliced, peeled, sawn).
3. Part of tree from which produced (longwood or trunkwood, stumpwood or butts, crotches, burls, freaks, special effects).
4. Matching (book matched, end matched, side matched, herringbone, diamond, and a great variety of special effects).

In addition, it is sometimes felt necessary to specify

(See Page 40)

CONCRETE PRODUCTS AND ATOM BOMBS

"OPERATION CUE"—SURVIVAL CITY THE ATOMIC TEST PROGRAM

By JACK STREBLOW, Concrete Products Division,
Basalt Rock Company, Inc.*

CONCRETE AND ATOM BOMBS . . .

JACK STREBLOW
Sales Manager,
Basalt Rock Company,
Project Consultant.

*Note: Jack Streblow, Sales Manager, Basalt Rock Company, Inc., Napa, California, was Project Consultant for Project 31.1 at the Nevada Test Site. Civil Effects Test Project 31.1 covered "Damage to Conventional and Special Types of Residences Exposed to Nuclear Effects". Basalt designed and supervised construction of four residential structures at Survival City; a reinforced lightweight concrete block and a precast concrete house at 4700 feet from ground zero, and two identical houses at 10,500 feet. Other project sponsors were: Federal Civil Defense Administration; Housing and Home Finance Agency; Federal Housing Administration; Rocklite Products, Inc.; Buildex, Inc.; Texas Industries, Inc., and Lightweight Aggregates, Inc.

Some 18 months ago the Basalt Rock Company and four other private firms started negotiations with the Federal Civil Defense Administration concerning participation in the structures portion of "Operation Cue," which culminated in the detonation of a nuclear device at Survival City on May 5 at 5:10 a.m.

It was the objective that basic technical data could be obtained as a result of exposing standard types of concrete residential structures to a nuclear explosion.

As a sponsor of Test Project 31.1 we designed, furnished structural concrete material, and supervised the construction of four houses. A lightweight expanded shale reinforced masonry house with a flat precast concrete roof was located 4700′ from ground zero (see fig. 4). This was a two bedroom, approximately 900 sq. ft. house which incorporated a concrete floor slab. The structural design was based upon the Uniform Building Code, California Earthquake, and F.H.A. requirements. Reinforcing and connection details as well as all features of this design were typical of everyday practice. During the course of construction the contractor did not place vertical steel under the 10 ft. window of this house as intended in the design and as a result the lower two courses of block at this point were forced in 2 inches (see fig. 6). Post shot inspection indicated minor structural damage with cracking almost entirely confined to mortar joints in those walls facing the blast (see fig. 5).

In addition to the expanded shale masonry house at 4700′ we and our associates also sponsored an expanded shale precast house at this same location (see fig. 2). This structure was similar in floor plan and appearance with the exception that an attached garage was utilized. Post shot inspection showed minor structural damage with cracks in front walls not exceeding 1/16″ (see fig. 3). In three separate locations at inter-

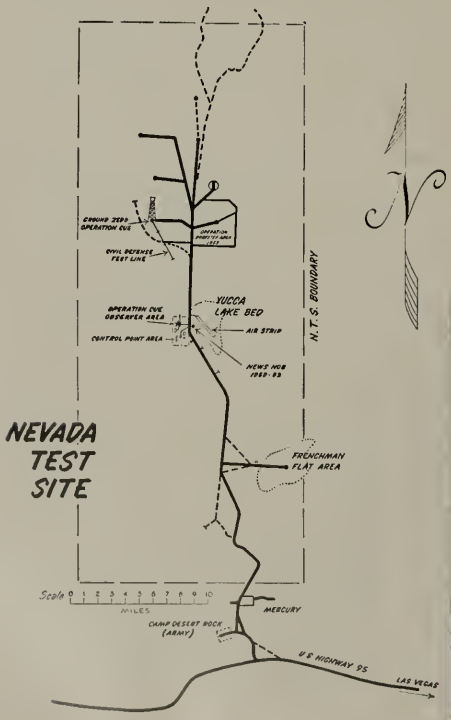


Fig. 6

BEFORE
AND
AFTER
BLAST

UPPER VIEW shows expanded shale reinforced concrete home built 4700 feet from ground xero prior to detonation of the atomic device. Fig. 2

LOWER VIEW shows devostating effect of the explosion, with much of the pre-cost concrete unaffected except for mortar joints. Fig. 3

REINFORCED MASONRY HOME

Before (Fig. 4)

and

After (Fig. 5)

secting walls there was evidence of spalling of concrete around welded connections. In all cases, however, the welds remained intact.

The experimental nuclear device used in this test has been rated as a 35 kilo ton, which is the equivalent of 35,000 tons of TNT. This represents a force approximately 1½ times that of the bombs used at Hiroshima and Nagasaki.

In reviewing the results of this test the following points we consider to be most important:

1. Expanded Shale concrete materials with proper connection and reinforced in accordance with California codes withstood the effects of the explosive force of an atomic blast.

2. The flat reinforced precast roofs on these houses added materially to the favorable results obtained.

EQUITABLE LIFE ASSURANCE SOCIETY BUILDING, San Francisco

EQUITABLE LIFE BUILDING

A CLIMAX TO FORTY-ONE YEARS OF BUILDING ACTIVITIES BY THE

DINWIDDIE CONSTRUCTION CO.

SAN FRANCISCO, CALIFORNIA

By FRED W. JONES

ARCHITECTS: W. B. GLYNN
A. J. LOUBET

(Successors to W. D. Peugh, A.I.A., Deceased)

CONSULTING ARCHITECT
Irwin D. Clavin

STRUCTURAL ENGINEER
F. W. Kellberg

MECHANICAL ENGINEER
H. W. Eagleson

ELECTRICAL ENGINEER
Bara, Weir & Finato

FOUNDATIONS
Chas. W. Lee

When "Architect and Engineer" proposed to show some of the important buildings erected by the Dinwiddie Construction Co. since the early nineteen hundreds, Curtis E. Smith, President and General Manager, said:

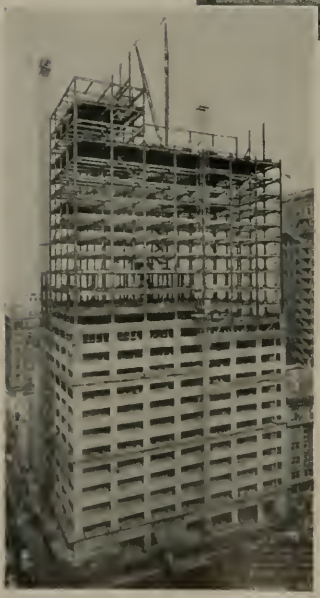
"I am sure most of your readers would not be interested in pictures of buildings forty years old. Doubtless some of these readers were not even born then."

The founder of this Company, William (Bill) Stewart Dinwiddie, shared similar views about placing too great an emphasis on past achievements. A twenty-year period was as far back as Mr. Dinwiddie cared to go when reminiscing on the Company's building activities.

This article, therefore, will touch only lightly on some of the firm's early construction work, which began in Portland, Oregon, in 1914, with the erection of the Oregon Journal Building, and later, the Meier & Frank Department Store. Benefited by much valuable experience while associated with the Thompson, Starrett Co., Mr. Dinwiddie proved equal to the task of "going it alone." And from the start, continuing over the years, the firm has enjoyed an enviable reputation for sound building and completing its contracts ahead of schedule.

In recent years, the Company's activities have been centered in the San Francisco Bay area, where it has handled projects ranging in cost from $30,000.00 to $10,000,000.00 under the capable leadership of Curtis

THE new Equitable Life Assurance Society Building is equipped with ten operatorless elevators which incorporate the most modern developments in elevator engineering. . . . Illustration below shows cars serving lower floors of the building and two controls.



CENTER: Excavation work begins November 9, 1953

TOP (Left): Pile drivers at work March 1, 1954

TOP (Right): Erection of steel, July 30, 1954

BOTTOM (Left): Pouring concrete floors and walls, November 1, 1955

BOTTOM (Right): Facing exterior with marble and aluminum, March 3, 1955

E. Smith. Mr. Smith has in his organization an experienced working staff, plus sound financial backing, wide buying power, complete modern equipment and the full confidence of architects and engineers.

With this well-knit organization, the Company has been and is today in a position to save the owner money on both large and small jobs without sacrifice of speed or quality.

One of the first commissions handled by Dinwiddie Construction Co. after moving to San Francisco in 1926 was the California State Chamber of Commerce building, followed by the 15-story Financial Building in Oakland (pictured on page 29). Then came an ever increasing number of important projects, such as Grace Cathedral, University of California buildings, Russ Building and, in recent years, I. Magnin Store in San Francisco, Macy's Department Store, Emporium Warehouse, Roos Bros. San Jose Store, The Pacific Telephone & Telegraph Company's Franklin Exchange Building in Oakland, Berkeley High School Auditorium in Berkeley, The Crocker First National Bank in Oakland, the Wm. Wrigley Jr. Company's Gum Factory in Santa Cruz, Hartford Insurance Company's building, San Francisco, Sunshine Biscuits' factory in Oakland and the Equitable Life Assurance Society's Building, San Francisco.

To properly describe the Equitable Building would necessitate the use of more space than this article permits. Rising to a height of 25 stories, The Equitable Building is the newest addition to San Francisco's fas-

AERIAL VIEW of MACY'S DEPARTMENT STORE in San Francisco, showing the I. Magnin Co.'s building at right and a portion of the city's famous Union Square may be seen in the background.

ABOVE: Aerial view of the new Berkeley (Calif.) High School Auditorium, which faces on a City Park development area.

AT RIGHT: Also an aerial view of the Roos Bros. Department Store in downtown San Jose.

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WRIGLEY CHEWING GUM plant at Santa Cruz, California

cinating skyline and the first large commercial office building to be built here since World War II. Originally designed by the late Wilbur D. Peugh, the sparkling structure reflects in many ways the modern trend in office building architecture, plus engineering and construction features of outstanding caliber.

Take the pile driving, for example. From the first pile driven to the last of the 467 piles driven, the contractors were constantly "dogged" by the neighboring office workers, as they had a perfect right to, being virtually driven crazy by the deafening boom-chuck, swish-boom of the world's largest hammer delivering 57,000 pounds of energy at each blow. The San Francisco newspapers devoted columns to ballyhooing the

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THE AMERICAN
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ARCHITECTS
CONFER THIS AWARD OF MERIT
East Bay Franklin Telephone Building in Oakland
Harry A Thomsen & Alex L Wilson, A I A
Pacific Telephone & Telegraph Co
Dinwiddie Construction Co
John J. Gould - Structural Engineer
Harry Haley - Mechanical Engineer
Lyle Fatton - Electrical Engineer
1953

EAST BAY FRANKLIN TELEPHONE BUILDING

Pacific Tel. & Tel. new building in Oakland, is recipient of A. I. A. Award of Merit.

"big noise," nicknaming the huge hammer "Alfred, the Monster." The longest pile measured 268 feet. The first foundation pile was driven by the Raymond Concrete Pile Company in December, 1953, and the driving continued on a single shift basis until January 13, 1954, at which time the job was double shifted. The driving was completed April 21, 1954, when some 10,000 office workers from neighboring buildings gathered for the long heralded "wake" of "Alfred, the Raucous."

MISCELLANEOUS

IRON WORK

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GRACE CATHEDRAL . . . All ornamentation was poured in place, monolithic with walls, with the exception of the entrance and the window directly over.

DINWIDDIE BUILDINGS

The following are some of the material firms and sub-contractors who, over the years, have participated in the construction of buildings by the Dinwiddie Construction Company of San Francisco:

Structural Steel—U. S. Steel Company; Judson-Pacific-Murphy Corp.; Herrick Iron Works. **Terra Cotta & Tile**—Gladding McBean & Co.; Kraftile Co.; National Tile & Terrazzo Co. **Lighting**—Smoot-Holman Co. **Showcase & Fixtures**—Weber Showcase & Fixture Co. **Bronze & Metals**—C. E. Toland & Son; Forderer Cornice Works. **Scaffolds & Towers**—Steelform Contracting Co. **Architectural Porcelain**—Porcelain Enamel Co. **Aluminum Doors & Windows**—Kawneer Company. **Marble**—Vermont Marble Co. **Plumbing & Heating**—Louis V. Keller, Scott Company, Jas. A. Nelson Co. **Lumber**—Art Hogan Lumber Co., Christenson Lumber Co. **Drinking Fountains**—Haws Drinking Faucet Co. **Steel Windows & Doors**—Michel & Pfeffer Iron Works. **Builders Hardware**—E. M. Hundley Hardware Co. **Air Conditioning**—Gilmore Air Conditioning Service. **Roofing**—Alta Roofing Co., Anchor Roofing Co. **Concrete Mix**—Pacific Coast Aggregates, Inc. **Oil Burners**—S. T. Johnson. **Elevators**—Westinghouse. **Photography**—Moulin Studios. **Painting**—D. Zelinsky & Sons. **Lath & Plastering**—Angelo J. Daneri. **Electric**—Lemoge Electric. **Safes**—Hermann Safe Co. **Cement**—Santa Cruz Portland Cement Co. **Masonry**—William A. Rainey & Son. **Miscellaneous Iron Work**—Star Iron Works. **Flooring**—Turner Resilient Floor, Inc. **Mill & Cabinet Work**—Central Mill & Cabinet Co. **Venetian Blinds**—Paramount Venetian Blind Co.

LIFE SCIENCES BUILDING

Built on the Berkeley campus of the University of California.

By far the most fascinating feature of the Equitable Building is the elevator installatiton—elevators that anticipate the changing tempos of a business day without help of human hands, whisking workers and visitors to and from their destinations. Specially designed and installed by the elevator manufacturer, the ten twin-banked luxury cars serve the tenants entirely without attendants and with unerring safety.

"Automatic traffic pattern control" puts the right amount of elevator service at the right place, precisely

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PCA's courteous and efficient drivers delivered concrete on schedule with split-second timing without a single accident despite heavily congested traffic conditions.

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SUNSHINE BISCUIT COMPANY

Modern plant at Oakland, California.

at the right time and going in the right direction," explained Gano R. Baker, Pacific Coast regional manager. "This traffic pattern control," continued Mr. Baker, "is the brains of the system that always provides ample elevator service. It electronically analyzes traffic demands by weighing the passengers, counting calls in both directions, counting by-passes and stops, and even measures time. Then, with these facts, ATP decides the appropriate operating pattern."

One of the building's two banks of five elevators operates on an express schedule, serving the 11th to 25th floors at a speed of 800 feet per minute. The second bank serves the twelve lower floors at 500 feet per minute. Each car carries a maximum of 20 persons.

Congratulations

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on its 41 years of building

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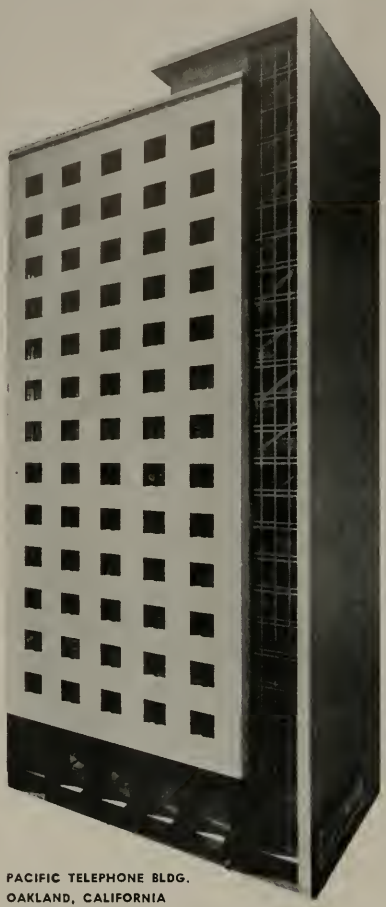

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Mechanical Contractors

OAKLAND SAN FRANCISCO LOS ANGELES

ISLAIS Creek Grain Elevator, San Francisco.

In addition to the erection contract, United States Steel supplied 5300 tons of fabricated structural steel, 3300 tons of steel piling and 50 tons of stainless steel. A weatherproof window sash developed by one of the aluminum companies marks the first time stainless steel and aluminum have been combined for the outer skin of a building. Tests have demonstrated that this type of window construction will easily withstand a 70-mile an hour gale, sans leaks or breakage. Stainless steel aluminum and Vermont white marble combine to make a truly sparkling exterior facing.

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THE EMPORIUM Warehouse, San Francisco

company are numerous and varied. It takes mighty good management to keep things rolling once a job is under way, and better still, to finish ahead of schedule.

Going back a few years, the Dinwiddie management never tires of telling how it was one of the first contractors to adopt monolithic concrete in place of masonry and stone on a church edifice. It was in 1930 that Grace Cathedral in San Francisco was built and at the time, there were misgivings that the true Gothic form could be preserved with concrete. Homer M. Hadley, regional structural engineer of the Portland Cement Association, wrote under the heading, Grace Cathedral—Gothic in Concrete: "It is unquestionably

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SAN FRANCISCO 24, CALIF.

HANGAR and Administration Building, N. S. Naval Reserve Aviation Base, Oakland.

of America and of the twentieth century, one of the most impressive, convincing and promising schemes for an American cathedral. (See photographs, page 23).

"When it was first proposed that reinforced concrete be introduced to that patriarch of tradition and experience, Gothic Architecture, some thought the meeting could result only in embarrassment. These fears were reasonable and they would have been justified had not Grace Cathedral been built to prove that architectural concrete is adaptable to a form and style that, during a

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Constructed at a major street intersection of downtown Oakland.

long history, had been expressed only in stone or other masonry."

In the construction of Grace Cathedral both speed and rigidity were obtainable by continuous operations of placing the concrete over a light, built-up lattice steel frame, with Gothic details emphasized as faithfully as when masonry materials were used in early days.

In building the 15-story Pacific Telephone and Telegraph Company's Franklin Exchange Building at 15th and Franklin Streets, Oakland (see photo on page 20), the Dinwiddie Construction Co. met with some unusual problems. For example, provision for extremely

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41 YEARS DINWIDDIE CONSTRUCTION CO. . . .

SPRECKELS SUGAR COMPANY plant at Woodland, California

heavy floor loads made necessary a building of weighty construction throughout. Concrete caissons were laid fifty feet below the basement level, driven in soil too firm for any hammer on the West Coast, consequently a hammer had to be brought from the East. This heavy driving aggravated the problem of holding the banks and of protecting adjacent buildings. The hole went 43 feet below grade in clay. The floor slab was a minimum of 5 feet and a maximum of 12 feet in thickness, reinforced with 1½ inch bars 4 inches on centers. In all, the building contains 7,100 tons of structural steel, 1750 tons of reinforcing steel, 28,000 yards of concrete, and 100,000 sq. ft. of steel movable partitions.

One of the several problems connected with the Crocker First National Bank job in Oakland (see photo on page 21), was the transportation from San Fran-

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by

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ONE of first Dinwiddie Construction Company jobs in San Francisco . . . the Southern Pacific Terminal Warehouse.

cisco to Oakland, supervised by the Hermann Safe Co., of a 55-ton safe door. Too heavy to be swung into place by a crane, the door had to be lowered inch by inch on jacks. Weighing as much as the average locomotive, it is more than nine feet in width and height and four feet thick. It is equipped with time locks and electrical microphone protection.

It is of passing interest to note the fine teamwork that has existed between the two Smith brothers in the Dinwiddie organization. Curtis E. Smith, at one time closely associated with the late Willis Polk, has successfully guided the financial and business operations of the Company since the passing of W. S. Dinwiddie, while Curtis' brother, Harold W. Smith, has held the brunt of the construction details, the selection of subcontractors and the preparation of bids. Harold served as President of Central California Chapter, A.G.C., in 1947. He was one of the early advocates of bid bonds, eliminating the irresponsible contractor and insuring the public the best possible job at the lowest possible price. "Bid bonds," Smith says, "assures the owner that the bidder has been thoroughly and competently investigated by an established, experienced and qualified surety company and considered by them to be capable, in all respects, of properly and faithfully completing the construction work involved."

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Part II

By CLARENCE B. LITCHFIELD*
A.I.A., Architect

ARCHITECTURE ESSENTIAL

Architecture and organized planning are essential to the achievement of each of these program needs. Even the best of the "well-trained personnel" cannot function to full efficiency without "adequate buildings and equipment." If the architect or administrator disregards a single one of these elements during the design stages, functioning of that portion of the program will be impaired for the life of the institution, which experience has repeatedly shown, will always be too long.

My firm of architects, LaPierre, Litchfield & Partners, has just completed the design of a new Correctional Institution for the Commonwealth of Pennsylvania. The Pennsylvania architectural firm of Lacy, Atherton & Davis, are associated with us.

This Institution is for one of the segregated groups which must be cared for in each state, namely, Defective Delinquents, and we believe its design fulfills all the foreseeable requirements of a modern Correctional Institution. We were very fortunate in working with a Commissioner of Correction, Arthur A. Prasse, who wanted an institution designed to anticipate and solve the problems of the future—not merely fill the immediate needs of today.

There are eventually to be 1,200 inmates in this institution, so an area of 1,250 sub-marginal acres was purchased, providing over one acre per inmate. The institution buildings are to be located approximately in the center of that acreage, within a fence-enclosed site of 30 acres, on a high hill, that will always catch the prevailing breezes, and offer a panoramic view of the unsurpassed beauty of the Pennsylvania countryside, valleys with receding wooded hills beyond.

The selection of sub-marginal land is an excellent choice, for the land will soon be developed into good productive property by the intelligent employment of the inmates. Outside of the enclosure fence are located the Administration Building, Power Plant, Institution Garage, Central Store House, Guard Towers, and limited housing for administrative personnel, as well as 1,220 acres of farm, orchard, garden and woodland, the cultivation of which will be one of the major work projects of the inmates. All other structures are inside the fence enclosure, which has been organized into four basic areas as follows:

(a) Recreation court, a quadrangle with gardens at each end surrounded by thirteen different buildings used by those well-adjusted inmates (Medium and Minimum Security) progressing in their training program toward parole. This court of 4¼ acres will allow much freedom in the movement of these inmates from building to building.

(b) An athletic field of 7½ acres used by all of the inmates for intensive physical exercise.

(c) A connecting corridor and those buildings attached to it. The inmates in the five cell blocks attached to this connecting corridor are in Maximum-Medium Security and their movements can be fully controlled.

(d) A service yard, the entrance of which is through a carefully supervised sally port. All vehicle deliveries are brought in here and the majority of the buildings requiring supplies are grouped around this yard.

The institution is designed for carefully studied segregation of inmates through use of the following four categories of housing—each inmate is provided with a separate cell or room.

(1) The Reception Building for 46 men where inmates will be taken directly from the courts for internal assignment after orientation and mental and physical examinations are made of each inmate.

(2) Four exterior cell blocks having cells for 100 inmates in each. These housing buildings are located along the connecting corridor to allow good administrative control of those inmates who are not yet fully adjusted to the program of the institution.

(3) Four treatment units which are also attached to the connecting corridor, and across from the hospital. One of these contains 23 interior cells, another nine, another ten. The fourth is a special section where four psychopaths can be held until transfer to a Mental Institution.

(4) An attractive Recreation Court has been designed surrounded by a group of seven room buildings, Academic Building, Chapel, Visiting and Classification Building, Gymnasium and Mess Hall. The inmates making good progress in the rehabilitation

(See Page 43)

*NOTE: *This is the second and concluding installment of an address delivered by Clarence B. Litchfield, architect, at New York University on April 30, 1955. Mr. Litchfield is a partner in the architectural firm of La Pierre, Litchfield & Partners of New York, and is a recognized international authority on the subject of prison design. Ed.*

CLAREMONT COLLEGE SCIENCE BUILDING — ALLISON AND RIBLE — ARCHITECTS

SCIENCE BUILDING
CLAREMONT COLLEGE

CLAREMONT, CALIFORNIA

ALLISON AND RIBLE, Architects

ESCHERICH BROS., INC., General Contractors

The Board of Fellows of Claremont College, Claremont, California, recently signed a contract with Escherich Bros., Inc., of Los Angeles, general contractors, to construct a new Science Building at 11th and Columbia in the City of Claremont and opposite the Honnold gate to Scripps College.

This building, when completed, will make available scientific facilities under the group plan, through which several of the colleges use a common science laboratory. The new structure will contain a complete laboratory for instruction in chemistry and physics; staff research rooms for both subjects, and adjunct preparation and storage rooms for material and equipment. Also included in the building is a lecture room with a seating capacity of 100 persons, and flexibly designed to serve different uses for group instruction.

The structure is to be constructed of reinforced brick and concrete with tile roof designed to harmonize with the established atmosphere of the buildings in the Associated Colleges at Claremont.

It is scheduled for completion before the fall term of 1955.

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WASHINGTON STATE CHAPTER

Cited for "honest and original design, using most fully the available techniques and knowledge for the satisfaction of human needs, harmonious in quality, well built and well situated in their sites," fourteen buildings designed by members were recognized as outstanding recent Pacific Northwest architecture at the annual Honor Awards Competition dinner.

Prize winners were the unanimous selections of a jury comprising Thomas R. Adkison of Spokane, Walter Gordon of Portland, and Victor Steinbrueck of Seattle. Included among Award winners were: Architects Wendell H. Lovett, Seth M. Fulcher, Paul Thiry, Bassetti & Morse, Ralph H. Burkhard, Mithun & Nesland, Gene Zema, Paul Hayden Kirk, and Waldron & Dietz and Associate Dan Miller.

PASADENA CHAPTER

Julius Shulman, Southern California architectural photographer, was the principal speaker at the June meeting, discussing many technical phases of proper architectural photography.

Donald Beach Kirby, A.I.A., San Francisco architect and Regional Director of the Sierra-Nevada District, A.I.A., reported on his recent visit to national A.I.A. headquarters in Washington, D. C.

A.I.A. REGIONAL DISTRICT CHANGES NAME

The name of the Sierra-Nevada Regional District of The American Institute of Architects has been revised

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

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Spokane Chapter:
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors, Kenneth Storment, Victor L. Wulff. Office of Secy.: 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President Harry W. Seckel, Vice President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P. O. Box 3288, Honolulu, Hawaii.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tasker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
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Producers' Council—Northern California Chapter (See Special Page)

and will be known in the future as the California-Nevada-Hawaii Regional District, according to Donald Beach Kirby, San Francisco architect and Director of the Region.

The revision in name has been made to more properly describe the three areas comprising the District.

CENTRAL VALLEY CHAPTER WOMENS ARCHITECTURAL LEAGUE

The Central Valley Chapter of the WAL was hostess to the Central Committee for its interim meeting recently in Sacramento.

Mrs. Herman Light of the Southern California Chapter presided. Mrs. A. C. Zimmerman of the Pasadena Chapter is secretary-treasurer. Guest speakers included Melton Ferris, Executive Director of the California Council of Architects, and Henry L. Wright, President of the California Council.

OREGON CHAPTER

The Oregon State Legislature recently approved appropriations for the rehabilitation and additions to the School of Architecture, University of Oregon.

CALIFORNIA COUNCIL OF ARCHITECTS

Amid sizzling temperatures and tempers, the 1955 session of the California State Legislature adjourned early this month with what will probably go down in the records as one of the most active in the history of the architects in California.

A number of legislative matters were left unfinished as the session ended, however, on the "credit" side of the year's program was a record of public education on professional practices and a well supported effort on the part of many architects.

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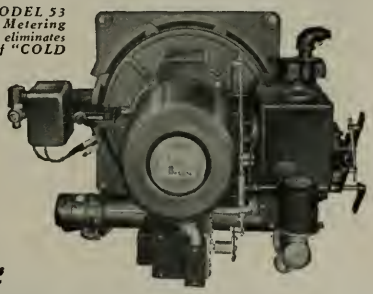

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FEMINEERS

The San Francisco Bay Area "Femineers" held their June meeting in the Elks Club, San Francisco, and heard world famous Chef Cardini describe various methods and types of cooking.

ENGINEER AWARDED GRAND PRIX INTERNATIONAL de l'INVENTION

Dr. D. B. Steinman, consulting engineer and eminent bridge designer, has been awarded the International Grand Prize of Invention, the honor being conferred upon Dr. Steinman for his inventive and scientific contributions and achievements in the design and construction of great bridges.

The Award was made in Paris, France, and the honor will be bestowed upon Dr. Steinman in a special ceremony in the United States.

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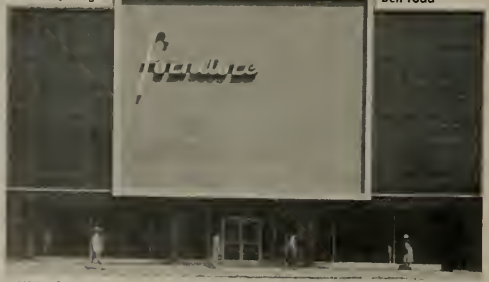

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AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS

Major-General William F. Dean, U.S.A., one of the outstanding heroes of the Korean conflict, and Dr. A. M. Zarem, manager, Southern California Division, Stanford Research Institute, spoke at the American Society of Heating and Air-conditioning Engineers in San Francisco, June 27-28.

The speakers discussed "Smog — A Challenge to Technology."

Technical sessions consisted of an evaporative cooling symposium and papers on such subjects as the measuring of heat flow through a test house with an analogue computer, the amount of air required to keep workers comfortable in commercial laundries, winter design temperatures in Canada, and an analysis of the cause of odors in air conditioning coils.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

"Salt Water Barriers for San Francisco Bay," was the subject of an address by Brig.-Gen. Hans Kramer, USA Ret., at the June meeting held in the Presidio Officers Club, San Francisco.

The speaker, a San Francisco Consulting Engineer, recently served as a member of a consulting board that studied the feasibility of salt water barriers in the San Francisco Bay area.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The June meeting was devoted to a discussion of Association matters and included reports by Director and Committee members.

Technical motion picture shorts were also shown

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
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Structural Engineers Association of
Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

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Announcement was made that the Annual SEAONC Picnic would be held at the Sonoma Golf and Country Club on July 16th, with many attractions including golf, swimming, softball, and an excellent dinner.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Byron Nishkian, Chairman of the Technical Program Committee, reports an excellent group of outstanding speakers have been secured for the Annual Convention, scheduled to be held in Yosemite on October 6-7-8.

Ted Newman, General Chairman, reported Bill Dreusike, Chairman of the Social Program Committee; Bill Brewer, Chairman of the Banquet Committee; and Earl Paddack, Chairman of the Finance Committee, are fast rounding up final details that will make the event outstanding.

AMERICAN SOCIETY OF CIVIL ENGINEERS—Los Angeles Section

The Board of Directors recently accepted the recommendations of a special committee studying the problem of adoption of a "Code of Ethics," and have released to all members copy of a resolution setting forth a number of "do's" and "don'ts."

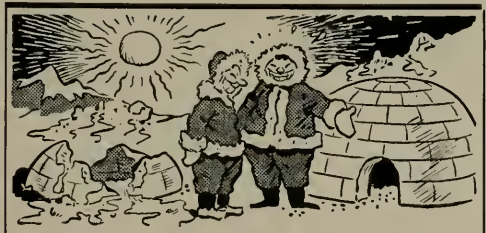
The activity is the result of a program to build better public and employee relations.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The June meeting consisted of a tour of the Los Angeles and Long Beach Harbor areas, arranged through Robert R. Shoemaker, chief harbor engineer of the Long Beach Harbor.

Prior to the tour, which was made by boat, members met at the Pierpoint Landing and following the boat trip an inspection was made of shore installations.

Dinner was served in Long Beach in the evening at which time Mr. Shoemaker further explained the harbor facilities and answered questions.



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Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

On May 16, 1955, the San Francisco Chapter of the Producers' Council held their monthly informational meeting at the Athens Club in Oakland. The program was presented by Mr. Ed Nelson, District Engineer of the Industrial Division of the Johns-Manville Sales Corporation. This talk was about asbestos—the most versatile material found in nature and one of the least expensive of all materials used. Mr. Nelson first of all explained the characteristics of asbestos fibre, saying that it is a mineral dug from the earth and often called the "magic mineral" because it is soft as silk, but stronger than steel; it is the only known material that is fibrous as wool or cotton, but acts like granite in resisting heat, wear and time. Mr. Nelson went on to explain that this material is not manufactured, but is a natural mineral deposit of a fibrous crystal—then he explained the various groups of fibres found in nature, giving the characteristics of each one.

ED NELSON
District Engineer
Johns-Manville Co.

In a very concise manner the speaker explained to the audience what is done with the fibres—the different uses of each kind for different sections of industry. The most prominent usage is in weaving of textiles for theatre curtains, fire-fighting suits, blankets for fire protection and so on—in the manufacture of papers and felts—for insulation—short fibres of asbestos are mixed with Portland Cement for reinforcing strength which has given to industry Transite Pipe for water pipe, sewer pipe, irrigation and so on. The list of combinations in products made with asbestos is too long to enumerate, but one point Mr. Nelson stressed was that no other material combines so many different and highly effective characteristics as asbestos and has the advantages of inorganic material, namely, resists heat, does not burn and will not rot and at the same time has the characteristics of the organic materials in its flexibility, softness, which give it workability; all of this combined with tremendous tensile strength—in many cases greater than steel. Our thanks to Mr. Ed Nelson for such a very interesting program.

1955 SPORTS DAY

The Producers' Council Annual Sports Day will be held at the Peninsula Golf and Country Club in San Mateo on Tuesday, June 28 from 3:30 p.m. to 9:00 p.m. It is intended to be an outing for architects and engineers and their associates and draftsmen. As in previous years the Producers' Council expects great attendance and the sports program will be very complete, including baseball, golf, tennis, etc., etc.

The next informational meeting of the San Francisco Chapter of the Producers' Council will be held at the Sheraton-Palace Hotel July 11. The Libby-Owens-Ford Company will present a film entitled "The Perfect Parallel." We hope that every member will be able to attend this meeting, which will be very interesting for all.

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REMODEL ROYCE HALL LOS ANGELES

Architect Pierre Clatyssens of West Los Angeles, is completing drawings for remodeling Royce Hall on the University of California campus in Los Angeles. Work includes a new concrete floor in basement, new dressing rooms, acoustical treatment, forced air ventilation, electrical, plumbing, remodeling class rooms. Estimated cost is $200,000.

FACTORY AND OFFICE BLDG

F. E. MacDonald, Jr., engineer of San Gabriel, is completing plans for construction of a 1-story, reinforced concrete, tilt-up wall factory and office building in Downey, for John W. Brooks. The building will be 150x200 ft. in area; composition roofing, wood trusses, steel sash, rolling steel and sliding doors, concrete slab floors, plumbing and electrical work, asphalt tile flooring in offices, forced air heating, and glass entrance door.

GREENHOUSE HEADHOUSE

Architects Latta & Denney of Glendale, are completing drawings for construction of a frame, stucco, and metal greenhouse and headhouse building at the Citrus Experimental Station in Riverside for the Board of Regents of the University of California.

The building will be of concrete construction.

APARTMENT BUILDING

Excavation has started for construction of a 46-apartment building at Vernon and Lee streets in Oakland for Gordon E. Peterson. The new building will be 4-story, plus a pent house and basement garage; structural steel frame, steel deck and concrete floors, automatic elevator, wood and plaster partitions. A swimming pool is included in the project which will cost an estimated $500,000 in its entirety.

R. V. DAVIS NAMED VICE-PRESIDENT

R. V. Davis has been named vice-president in charge of sales of the steel grating products division of the Bufnel Company, Ltd. of Los Angeles, California, according to an announcement by H. M. Nelly, president.

Prior to his association with Bufnel, Davis was with the A. O. Smith Corpn., and the Southern California Gas Company.

DEPARTMENT STORE

Architects Loubet & Glynn of San Francisco, are completing plans for construction of a new department store buidling in San Carlos, Santa Clara county, for Sears, Roebuck & Company of Los Angeles.

The new department store building will be 1 and two-story, with basement; brick and frame construction with some structural steel. Estimated cost of the building is $2,500,000.

OCCIDENTAL COLLEGE

Architects Chambers & Hibbard of Los Angeles are completing drawings for construction of various facilities at the Occidental College in Los Angeles, including 1-3 story reinforced concrete men's dormitory containing 24,400 sq.ft. floor space; estimated cost with furnishings $405,000; two 3-story reinforced concrete women's dormitory containing 35,000 sq.ft. of floor space, estimated cost with furnishings $572,000; three additions to the dining hall containing 21,382 sq.ft., estimated cost with furniture $474,000; four 1-story, reinforced brick with stucco exterior art building measuring 130x47 ft.

BANQUET HALL BUILDING

Architect Jas. H. Garrott of Los Angeles, has completed plans for construction of a 2-story concrete block banquet hall building to be built in Los Angeles. The building will cover an area of 44x160 ft. will have a composition roof, concrete and asphalt tile floors, interior plaster, gas water heater, toilets and locker rooms, kitchen facilities with automatic dish washer and garbage disposal unit. Estimated cost is $30,000.

HOLLYWOOD MOTEL

Architect Sam Reisbord of Los Angeles is completing plans for construction of a 2-story, 51-unit, frame and plaster Motel in Hollywood for S. Jon Kreedman & Company.

SCHOOL BONDS APPROVED

Voters of the Indio School District approved a proposal to issue and sell school bonds in the amount of $500,000 to finance construction of a school expansion program in the city of Indio.

Smartly designed, extraordinarily convenient is this *entirely new* HAWS Semi-recessed Fountain that takes up little space in corridor or room and has drinking fountain head and operating lever handle accessibly located opposite one another on the top platform. An access panel in wall is NOT required for this fountain and all fittings are accessible from under bowl.

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SPECIFICATIONS OF HARDWOOD

(From Page 8)

where the matching is to occur, as center matched, end matched, random matched, balance matched.

As an example of the possible application of already standardized grading rules, consider another part of architectural millwork — interior trim and moulding. There are two standard grades for this category—grade "A" and grade "B." As an aid to specification writing, the characteristics and seasoning defects allowed for the highest grade ("A") are listed following. Thus, when "best grade" is specified, the material must meet these standards but no more than these. When the job requirements for interior trim and moulding are other than these, it is emphasized that specification qualifications to show these requirements must be set forth.

GRADE "A," HARDWOOD INTERIOR TRIM AND MOULDING

Characteristics:

Sapwood. Sapwood shall be allowed in all items to any degree, except in the instances of cherry, selected red birch, red gum, or unsteamed walnut. In these woods, the sapwood shall not exceed 25 percent of the surface measure in the aggregate of any one piece, and not more than 5 percent of any one pattern, style, or total of same kind of units.

Stain. Stain shall be permitted in not more than 25 percent of any one piece (surface measure) and not more than 5 percent of the quantity of any one item.

Streaks. Streaks shall be permitted in not more than 10 percent of the quantity of any one item.

Worm Holes. Worm holes not larger than 1/16 inch in diameter, and not more than one to each three linear feet, shall be allowed, providing the maximum quantity of material containing worm holes shall not exceed 5 percent of any one item.

Knots. One knot, tight, sound, and smoothly dressed, not to exceed ½ inch greatest diameter in stock six feet long or less, and not more than two in stock over six feet long, shall be allowed. The maximum quantity of material containing knots shall not exceed 5 percent of any one item.

Torn grain. A maximum depth of 1/32 inch will be permitted on machine run stock, in not over ten percent of the length of any one piece and not more than 5 percent of the quantity of any one item.

Seasoning Defects.

End splits. End splits ¼ inch in length for each linear foot, or its equivalent, per piece shall be allowed, except where exact cut lengths are specified.

Surface checks. Surface checks not to exceed 1/32 inch wide, 1 inch long, and one check per foot (surface measure) per piece, shall be allowed. The maximum quantity of material containing surface checks shall not exceed 5 percent of any one item.

Warp. Warped stock that will lay flat or straight with ordinary nailing shall be allowed.

It is essential that the architect and specification writer be equipped with data on the species of hardwood that are available. The great variety in the United States provides a wide range of different woods, and considerable differences in the qualities that will affect the style of architecture and interior effects sought by the architect. Brochures on all the readily available hardwoods, many in color, are available from the reference library of the Woodwork Institute of California, and reasonably complete files can be obtained from the various lumber associations. In most instances, the local Woodwork Institute member can provide the architect with samples of wood for consideration, and certainly he can advise on the availability of any species. In addition, several factors must be considered along with availability and cost. The degree of hardness might be a consideration. This property has been well expressed in definite numerical values based upon scientific research. Obviously, the amount of resistance to wear and scarring and marring will vary with the various uses intended. At the same time simply specifying a certain wood because it is hard is not good policy, for the harder the wood the more difficult it is to work, the harder it is to nail, and the more likely it is to split in nailing.

The architect should also concern himself with the ability of the specified wood to stay in place, which is simply a measure of change in dimension and shape. Contrary to metal, the dimension and form of wood, regardless of species, is not affected by changes in temperature. This is one of the outstanding attributes of wood, and makes it especially useful for windows, doors, and exterior frames where there are high extremes in temperature. Wood is hygroscopic, and will shrink or swell if allowed to give off or take in moisture. For any given wood this quality depends on its shrinkage factor, the rate at which it will give off or absorb moisture, the method by which it was sawn, the direction of grain, the moisture content at time of

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use, and the conditions under which it was seasoned. In most cases, a number of these factors are compensating. Actually, when properly considered in the light of the use for which it is intended, and when properly processed, changes in dimensions of the various hardwoods in actual use is quite small. Since the change always lags considerably behind the atmospheric change, extremes in humidity are never reflected in the wood itself.

Further, the architect must know the colors of the hardwoods, if he is to specify properly. In some woods, there is little or no discernible difference between the heartwood and the sapwood, and in others there is a marked difference. In illustration, it would not be practical to specify "selected heart" or "all sapwood" to achieve a distinctive color when black gum, tupelo, or steamed walnut is to be used. Conversely, where the depth and uniformity of color is important, it must be remembered that there is a marked difference in the color between the sapwood and the heartwood in birch, brown ash, cherry, soft elm, red and sap gum, mahogany, and unsteamed walnut.

The various factors hinging around the grain which affect the appearance of hardwood are many. Fine and coarse texture grain, diagonal grain not parallel to the edge of the piece, undulating grain that forms curly, interlocking, gnarled, birdseye, swirly, or similar variations in grain are all to be considered and should properly be specified if they matter.

Too, the methed of sawing affects the appearance of hardwood, and in many cases its resistance to impact and abrasion. Most important of all, the inherent natural characteristics of hardwood may be either subdued or accentuated by special methods of sawing. Thus the various degrees of quarter sawing or plain sawing can be practiced and the exposed widths of the rays and flakes in the grain can be controlled, giving rise to flecks, ripple marks, ribbon stripes, mottled effects, spots and streaks, and other variations in appearance.

What then is necessary to properly specify hardwood for architectural millwork? Certainly more than saying "all interior finish shall be FAS birch, selected for color," or some similar inadequacy. Equip your library with a ready reference that gives you the individual characteristics inherent in the hardwoods. Have the data at hand that gives you relative hardness and tendency to stay in place of the species that you specify. Know or be able to find out just what effects can be had by different methods of sawing. Know the various grains in each species, and if possible furnish your library with color plates showing these grains, as well as the colors of the various species, in both sapwood and heartwood. For your assistance, a limited bibliography has been provided at the end of this article, but it is pointed out that there are many such publications. Consult your local Woodwork Institute member as to

(See Page 43)

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PERSONALITIES

J. Stanley Ott
Planning Director
Stockton, California

Born in Cleveland, Ohio, in 1910, J. Stanley Ott completed his formal education with a Scholarship to the School of Fine Arts in Fontainebleau, France in 1931. Following graduation he worked in the small home design field and later taught Architectural and Structural Specialized Drawing in high schools of Cleveland, Ohio, and in adult extension classes at Cleveland College, Western Reserve University, and later taught Planning and Housing at the same institutions.

J. STANLEY OTT
Planning

Ott left teaching in 1942 to enter offices of the Cleveland, Ohio Planning Department under John T. Howard, now consultant and instructor in Planning at M.I.T. In 1948, having coordinated the general plan for Cleveland, Ott accepted the post of Planning Director of San Bernardino, California, and in 1951 accepted the position of Planning Director for the City of Stockton, California. He is a member of the Kiwanis Club; Secretary-treasurer of the San Joaquin Planning Association; Stockton Engineers Club; and Section Director for Northern California Section of the American Institute of Planners.

Ott's hobby is cabinet making and building; married, three daughters.

CALIFORNIA STATE FAIR FEATURES SUNSHINE AND WATER

Theme of the 1955 California State Fair will be "Sunshine and Water," and plans are under way to place great emphasis on this year's exhibits and activities that will highlight the State's great natural resources and reclamation projects.

The Fair is scheduled for September 1-11.

FOREST PRODUCTS RESEARCH INSTITUTE MEETS IN SEATTLE

The ninth annual meeting of the Forest Products Research Society will be held in Seattle, Washington, the latter part of this month.

More than 50 interesting topics have been scheduled

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DOUGLAS FIR PLYWOOD GOLDEN JUBILEE

The Douglas Fir Plywood Association celebrated its Golden Jubilee this month in Portland, Oregon, when representatives of mills met in a three day convention.

Many technical subjects were discussed by outstanding speakers, and activities were concluded with a tour of nearby lumbering and mill operations.

SPECIFICATIONS OF HARDWOOD

(From Page 41)

availability and relative prices of the various woods to be considered. And finally, follow the outline suggested herein for specifying the effects you desire. Then, when a manufacturer has been selected, ask him for samples, use them for reference, and you will find yourself experiencing no difficulty with your hardwood architectural millwork.

BIBLIOGRAPHY: *Northeastern Lumber Manufacturers Assn., Inc.* "Northeastern Hardwoods." New York 16, N.Y. 271 Madison Ave. *The Mahogany Association.* "The Mahogany Book." Illinois. 75 East Wacker Dr., Chicago. *Philippine Mahogany Assn.* "Philippine Hardwood." California. 111 West 7th St., Los Angeles 14. *American Walnut Manufacturers Assn.* "Walnut Veneer Types." Illinois. 666 Lakeshore Drive, Chicago 11. *Roddis Plywood Corp.* "Characteristics of Modern Woods." Wisconsin. Marshfield.

PRISON ARCHITECTURE

(From Page 32)

program are assigned to facilities around this Recreation Court. One of these Recreation Court cottages is for pre-parolees. A small store is incorporated where the inmates can make selection of their release clothing. Special lockers will be provided for these clothes and the inmates will be allowed to wear them after their day's work is over. Shoes need time to be broken in. Unfamiliarity with suits will be replaced with pride in appearance. This design allows for fifteen different segregated groups within the single institution.

Medical treatment is well provided for by the Hospital, located in the center of the Institution. Of course, most medical treatment is for ambulant outpatient inmates. (By out-patient, I mean those men living in their cells, not living in the Hospital but reporting periodically to the hospital.) For in-patient treatment, there is a total of 39 beds—eight in separate rooms for isolation and treatment, and the remaining 31 divided into three wards for segregation, a solarium, and a recreation yard. The treatment facilities, separated from the hospital bed areas, provide Operating Room, Psychiatrist's Office, General Treatment and Examining Rooms, Electro-Therapy, Laboratory, Pharmacy, X-Ray, three Dental Chairs and a Dental Laboratory.

EDUCATIONAL FACILITIES

Educational facilities and training for vocational skills are incorporated profusely throughout the Institution. The academic building located on the Recreation Court, contains eight classrooms, a library for informal browsing and a small auditorium with 214 seats. The ground floor is to contain vocational shops. The ground floor of each cell block and rooms building provides areas for hobby shops. The ample greenhouse, set in the middle of a garden area, will develop many a green thumb and supply flowers for the many flower beds around the Institution.

The Industry and Maintenance Shop Building, with its 75,600 square feet of floor area, will allow for the development of many Vocational Shops and several industries. The Band and Instrument Practice Rooms, over the Guards' Dining Room, will give an unprecedented music center, prepare inmates to develop that hobby and to give concerts in the Gymnasium and Band Gallery overlooking the Mess Hall. All farm institutions have found canning to be a good seasonal

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vocational training, and at the same time a good facility to reduce food costs. Our cannery is located on the ground floor under the Storage Building.

The classification and psychology section is stressed in this type of institution, and should be more greatly emphasized in all types of institutions. The classification and psychology section along with inmate visiting and the chapel, is logically placed near the pedestrian and visitors' entrance. All three of these activities are ones to which each inmate looks forward with keen anticipation. This classification area provides for six private offices, a testing room, a staff meeting room and a large clerical office with record storage areas on the ground floor. Of course, the classification officials will be circulating throughout the institution, and will confer often with Chaplains and educational, vocational and recreational directors.

The visiting program is planned in two categories with separate facilities. One secure visiting room will be used with supervised table visiting. Another, for adjusted inmates will be a large pleasant room with furnishings similar to a living room. This group using the latter room will visit on the terrace or lawn during pleasant and warm days.

The Chapel, located at the south end of the arcade leading from the Classification Building, contains seats for 400 inmates, a choir gallery to the rear, a revolving platform with three altars: one each for the Protestant, Catholic and Jewish faiths. Offices are provided for each of the Chaplains. An electric organ with record and sound attachments will allow for seasonal and religious music to be quietly spread through the air by microphones in the Chapel Tower. A question arose about the location of the Chapel during the design stage. One of the Chaplains was fearful that the Superintendent would not let the inmates in the "pole" cross the court. I replied that I wanted to plan the institution so the Superintendent, no matter who he was, would have to allow for that pleasant walk.

Recreation is carefully considered by providing a 15 square foot per-man Day Room off of each cell block. The Recreation Court provides for outdoor games for those in the seven cottages surrounding this Court. Each cell block along the "pole" has its own segregated Recreation Yard. The athletic field will allow for scheduled intensive activities in good weather, while the combined Gymnasium-Auditorium will give athletic space during inclement weather of over six square feet per man. When large numbers of the inmates are to be brought together to see movies, they can be seated in the bleacher seats of this same room. A Commissary is located in this structure to allow for purchases from the "pole" and the athletic field. This building also houses a visiting team locker and shower room as well as providing plenty of room for athletic equipment storage.

Feeding facilities are cafeteria type, with tables and benches for the inmates. The kitchen and food preparation areas are bright, well-lighted and easily supervised. The dining hall is brightly lighted and well ventilated.

The exterior of the buildings will be a combination of local stone and a light warm reddish brick. The designs are contemporary with a feeling of openness. This is best illustrated by comparing this structure with the plans of two schools we have just designed. The comparison shows the similarity in the design spirit. For actually this correctional institution is a school.

(Conclusion)

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BOOK REVIEWS
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NEW ENGINEERING REGISTRATION EXAMINATION BOOK. By August E. Waegemann, 251 Post St., San Francisco. Price $7.00.

A new and enlarged book is now available covering examinations given by the State of California for the registration of Civil Engineers and Engineers in training. The Examinations given between 1940 and July of 1949 include the unofficial solutions of the problems, and the balance of the examinations from July 1949 to December 1953 include the problems only.

HISTORY OF ART — College Outline Series. By Jean Anne Vincent. Barnes & Noble, Inc., 105 Fifth Ave., New York 3. Price $1.50.

This book treats the art styles which have most directly inspired or affected our own cultural traditions. By understanding how artistic styles are modified by the environment, one can achieve a better comprehension of past civilizations and perhaps of some patterns in our present culture, most directly synthesized and apprehensible in the visual arts.

The History of Art is a painless way to correlate everything one has ever learned. It offers in capsule form a rich diet of knowledge seasoned by understanding, predigested yet palatable, and appealing to the eye.

MATERIALS OF CONSTRUCTION — Sixth Edition. By Albert P. Mills, Harrison W. Hayward & Lloyd F. Rader. John Wiley & Sons, Inc., 440 4th Ave., New York 16. Price $7.50.

The revision of this standard text provides a wealth of up-to-date information on the manufacture, properties, and uses of engineering materials. It has been expanded by 15 per cent and several new chapters have been added.

Fundamentals are carefully treated in the early portion of the book, then individual materials of construction are described in detail in separate chapters, giving a clear and useful understanding of the manufacture, properties, methods of testing, and applications of these materials. Industrial as well as structural applications are included.

New in the sixth edition is a chapter on service requirements of metals revised to cover recent development in progressive fracture under repeated stresses, creep high and low temperatures, wear, corrosion, and impact testing; there is a new chapter on mineral aggregates; classification of structural clay products; and chapters on organic protective coatings and organic plastics.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Metal grating. A 16-page Date and Specifications Manual (A.I.A. DOC. File No. 14-P) covering all types of grating, open steel floor armor, stair treads, vessel liners, bridge decking and drain grates has just been issued. The book is a "tool" for industries dealing in construction, oil, traffic, building, chemicals, food processing, transportation, factories, and heavy equipment. Copy free, write DEPT-A&E, Klemp Metal Grating Corpn, 6605 So. Melvina Ave., Chicago 38, Illinois.

Better floor care. "Everything you need for better floor care," a new 8-page, 2-color, brochure relating to floor and scrubbing machines, industrial vacuum cleaners, rug and upholstery cleaning equipment, furnace cleaning units, sanding machines, floor cleaners, rug and upholstery shampoos, floor sealers, preservers and waxes; a liquids chart included for wood, concrete, terrazzo, linoleums, marble, cork, asphalt tile, rubber tile, vinyl tile, ceramic tile, and carpeting. Free copy write DEPT-A&E, Multi-Clean Products, Inc., 2277 Ford Parkway, St. Paul 1, Minn.

Spiral fluted masonry drills. A 4-page catalog fully describes and illustrates the new Rotrkore core type spiral fluted carbide tipped masonry drills; drills clean accurate holes in hard brick,

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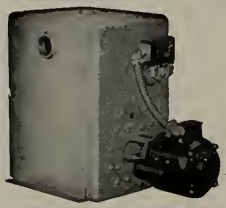
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Sound insulating double partitions. A new technical bulletin (A.I.A. File 20-B-1) released by the Metal Lath Manufacturers Association gives complete information on sound insulating double partitions; a partition consisting of two panel faces of metal lath and plaster built, with one exception, without any cross ties. Elimination of connectors between panel faces serves to increase resistance of the partition to sound transmission. Panel faces may be constructed of channel studs, or with staggered or a double row of prefabricated metal studs. Free copy of bulletin available. Write DEPT A&E, Metal Lath Manufacturers Association, Engineers Building, Cleveland 14, Ohio.

Ceratile handbook. A new pamphlet (A.I.A. File 23-a) is designed to aid architects, designers, contractors and others in the building industry who are interested in learning more about Ceratile . . . what it is, and how it is used. The brochure also contains a number of illustrations of installations. For free copy write DEPT·A&E, Pacific Tile & Porcelain Co., 7716 E. Olive St., Paramount, California.

Top running overhead cranes. An informative 20-page catalog illustrates and gives complete information on Top Running Double Girder Cranes with top running trolley and under running trolley in capacities from 2-tons to 12-tons and with spans up to 60-feet. Detailed illustrative data also given on both motor driven bridge types and hand geared or push type in capacities from 1 to 10 tons and with spans up to 50 ft. Detailed dimension sheets are given for each type. Copies available write DEPT·A&E, Bulletin T202, Chicago Tramrail Corp'n, 1330 S. Kostner Ave., Chicago 23, Ill.

Thermopane pocket reference data. A new, pocket-size, folder is now available which lists all the standard size units of Thermopane insulating glass. Designed for quick use of those who specify, build with, use and sell glass; gives list of standard sizes to encourage use for greater savings. The four-page folder may be obtained by writing DEPT·A&E, Thermopane Sales, Libbey-Owens-Ford Glass Co., 608 Madison Ave., Toledo 3, Ohio.

Concrete around the home. An informative booklet on advantages and economy of reinforced concrete construction in and around the home; fully illustrated, details of types of concrete; specific data on use of welded wire fabric for driveways, sidewalks, patios, garage floors, foundation slabs, porches, basements, and swimming pools. Free copy write DEPT·A&E, Wire Reinforcement Institute, Inc., 1049 National Press Bldg., Washington, D. C.

Vermiculite acoustic plastic. "The Silent Treatment," a comprehensive new booklet (A.I.A. File No. 39-b) covering vermiculite acoustical plastic and its application; contains table of physical data, standard specifications for manual and machine application, and sketches of two constructions granted four hour fire ratings; numerous photographs. Free copy write DEPT·A&E, Vermiculite Institute, 208 So. LaSalle St., Chicago 4, Ill.

Drafting room furniture and equipment. A new revised catalog featuring drafting room furniture, drawing, tracing and X-ray equipment; illustrates, describes and gives specifications; catalog designed to give complete working knowledge of equipment and to show how various units are adaptable to specific business and industrial needs. Copy available write DEPT·A&E, Stacor Equipment Co., 768-778 E. New York Ave., Brooklyn 3, N. Y.

Case study warm air space heaters. A case study has just been published, describing how the flexibility of oil fired, warm air space heaters was put to good use in designing a heating system for a large receiving and shipping terminal; explains how the positioning, versatility and extensive air throw of the units enabled the designers to provide ample protection for tender fruit against freezing, and how done without interfering with transfer operations. Copy free write DEPT·A&E, Dravo Corp'n, 1203 Dravo Bldg., Pittsburgh 22, Pa.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performence or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00. Cartage—Approx. $10.00 per M. Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull bress plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ½" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White ..... 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.62

Aggragates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $1.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	25/32x2¼	½x2	¾x2	1x2
Clear Qtd., White	$425	$405	$	$
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

25/32 x 2¼ First Grade	$390 00
25/32 x 2¼ 2nd Grade	365.00
25/32 x 2¼ 2nd & Btr. Grade	375.00
25/32 x 2¼ 3rd Grade	240.00
25/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
25/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00
Floor Layer Wage $2.83 per hr.	

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
27/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
27/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
27/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
27/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry	185.00
8 to 24 ft.	

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscard ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Wholesale Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ³⁄₁₆" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	$ .17
12 x 12, each	

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00

Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL YENEER (3)
Ceramic Yeneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Yeneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Yeneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Yeneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PN 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Las Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

DRIVE-IN BANK, Los Angeles. Community Bank, Huntington Park, owner. 2-Story frame and stucco and concrete block, composition and crushed rock roof, asphalt tile, concrete and brick floors, acoustic ceilings, air conditioning, gas water heating system, drinking fountains, toilets, storage vault, insulation, asphaltic and concrete paving, aluminum sash; 97x 61 ft.—$55,000. ARCHITECT: Killingsworth-Brady-Smith, Long Beach. GENERAL CONTRACTOR: Myers Bros, Los Angeles.

ASSEMBLY PLANT, Santa Clara. Day-Bright Lighting Co, owner. 1-Story reinforced concrete, tilt-up, construction; 120x 240 ft., wood roof, some structural steel—$164,200. ARCHITECT: Blanchard & Maher, San Francisco. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

AIR FORCE STORAGE FACILITIES, Castle Air Force Base, Merced. U. S. Corps. Engineers, San Francisco, owner. Power plant, shop, storage, administration, utilities, elevated water tank and water supply — $17,359. GENERAL CONTRACTOR: Stolte, Inc., Oakland.

FRATERNITY HOUSE ADDN, Kappa Sigma, Los Angeles. Kappa Sigma Fraternity House, Los Angeles, owner. Wood shingle roof, stud and plaster partitions, heating, electrical, plumbing, 1600 sq.ft. of area. ARCHITECT: Faxon & Gruys, Beverly Hills. GENERAL CONTRACTOR: E. W. Lieshman, Los Angeles.

COMMUNICATIONS STATION, U. S. Air Force, Tonopah, Nevada. U. S. Corps of Engineers, San Francisco, owner. Project includes construction of 15 buildings, roads, walks, parking areas, electrical distribution system, water supply and distribution system, sewers, fuel and gas lines, storage facilities — $903,174. GENERAL CONTRACTOR: Lembke-Clough & King, Inc., Las Vegas, Nevada.

MUNICIPAL SWIMMING POOL, Porterville, Tulare county. City of Porterville, owner. Reinforced concrete swimming pool — $29,470. ARCHITECTS: Swartz & Hyberg, Fresno. GENERAL CONTRACTOR: Maine Constn Co., Porterville.

OFFICE & AUDITORIUM, Los Angeles. Amalgamated Clothing Workers of America, Los Angeles, owner. Frame and stucco building, structural steel, composition roofing, slab and asphalt tile, ceramic and terrazzo, acoustic tile, central heating

and ventilating, pipe columns, metal sliding doors, brick veneer work, aluminum sash, 150x150 ft. in area. ARCHITECT: Richard Neutra and Robert Alexander, Los Angeles. GENERAL CONTRACTOR: E. C. Engr & Constn Co., Encino.

MOTEL, San Francisco. Milonas & Son, San Francisco, owner. 2-Story frame motel —$135,000. ARHCITECT: H. C. Baumann. San Francisco. GENERAL CONTRACTOR: Earl Barnes, Redwood City.

WARREN ELEMENTARY SCHOOL, Sacramento county. Elder Creek Elementary School District, Sacramento, owner. Frame and stucco construction; 5-classrooms, toilet rooms — $95,426. ARCHITECT: Gordon Stafford, Sacramento. GENERAL CONTRACTOR: Guth & Schmidt, Sacramento.

COUNTY WELFARE BLDG. (Annex), Oakland, Alameda county. County of Alameda, owner. 3-stories, new stairs, corridors, elevator, toilets, reinforced concrete on light steel frame and frame construction—$698,800. ARCHITECT: John Hudspeth, Oakland. GENERAL CONTRACTOR: Haas & Haynie, San Francisco.

ELEMENTARY SCHOOL (Corvallis), San Lorenzo, Alameda county. San Lorenzo Elementary School District, San Lorenzo, owner. Addition of 5 classrooms, 1 specialty room, outdoor classrooms, toilet rooms; frame and stucco construction—$108,853. ARCHITECT: Schmidts & Hardman, Berkeley. GENERAL CONTRACTOR: Indenco, Oakland.

COLD STORAGE BLDG., Turlock, Stanislaus county. Turlock Refrigeration Co., Turlock, owner. 1-Story reinforced concrete tilt-up construction, fiberglass insulation; 13,500 sq. ft.; Docks and canopies 10,700 sq. ft.—$90,000. ENGINEER:

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clare	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	43.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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BUILDERS! You can make more money; get information you need before it is published elsewhere; Subscribe to the daily ARCHITECTS REPORTS, only $10.00 per month. Complete information from ARCHITECTS REPORTS, 68 Post Street, San Francisco. Phone DOuglas 2-8311.

MAYNARD DIXON MURALS—signed and dated 1935. Two, oil on canvas, about 7 feet 10 inches x 15 feet 5 inches and 7 feet 11 inches x 17 feet 10 inches. Mountains and mounted figures. Edward C. Washer, 628 Montgomery St., San Francisco 11, GArfield 1-8427.

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SAND BLASTING EQUIPMENT and sand: Painters scaffolding, compressors rented, etc. Call JACK SMITH for prices. Smith Industrial Supply Co., 395 Irwin St., San Francisco. Phone UNderhill 1-2861.

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Phillips Refrigeration Products Co., San Francisco. GENERAL CONTRACTOR: Camping Constn. Co., Oakland.

CHURCH & MEETING HALL, Oakland, Alameda county. Radio Revival Church, c/o Architect, owner. Concrete block and structural steel frame construction with wood roof, 18,000 sq. ft. floor area — $150,000. ARCHITECT: Andrew P. Anderson, Oakland. GENERAL CONTRACTOR: T. R. Reese, Oakland.

AUTO SALES & SERVICE, San Francisco. Van Etta Motors, Inc., San Francisco, owner. 1-Story reinforced concrete construction, frame and some structural steel—$200,000. ARCHITECT: John G. Minton, San Francisco. STRUCTURAL ENGINEER: L. K. & B. L. Nishkian, San Francisco. GENERAL CONTRACTOR: Cahill Constn. Co., San Francisco.

AMMUNITION MAINTENANCE FACILITY, Sierra Ordnance Depot, Hurlong, Lassen county. Corps of Engineers, Sacramento, owner. Concrete frame and cinder block walls, steel frame, asbestos siding and roof (changes); boiler house: 1,470 sq. ft.; 40,000 gal. elevated steel tank—$497,000. GENERAL CONTRACTOR: Continental Construction Co., Sacramento.

FIRE STATION, Glendale, Los Angeles county. City of Glendale, owner. Frame, stucco and concrete block construction, built-up composition roofing, exposed t&g wood sheathing, wood trusses, rigid insulation, concrete slab, asphalt tile and ceramic tile, steel casement and wood sash, metal louvres, forced air heating, locker and shower rooms, dormitory, apparatus room, recreation room, kitchen, offices and alarm room; 55x69 ft.—$53,465. ARCHITECT: Merrill W. Baird, Glendale. GENERAL CONTRACTOR: H. M. Keller Co., Inc., Burbank.

WAREHOUSE, Addn., San Francisco. Macy's, San Francisco, owner. 2-Story reinforced concrete construction 140,000 sq. ft. floor area — $787,542. GENERAL CONTRACTOR: Dinwiddie Constn. Co., San Francisco.

COMMUNITY CENTER (Live Oak), Berkeley, Alameda county. City of Berkeley, owner. 1-Story concrete block and wood frame construction, metal sash, theater and stage, maple floor gymnasium—$177,130. ARCHITECT: Ratcliff & Ratcliff, Berkeley. GENERAL CONTRACTOR: Lathrop Constn. Co., Berkeley.

ELEMENTARY SCHOOL (Meadow Homes), Concord, Costa county. Mt. Diablo Unified School District, Concord, owner. 7-Portable classrooms and buildings, staff dining room—$98,432. ARCHITECT: Anderson & Simonds, Reynolds & Chamberlain, Confer & Willis, and John Lyon Reid, Oakland. GENERAL CONTRACTOR: Sugar City Builders, Crockett.

WAREHOUSE, San Jose. San Jose Hardware Co., San Jose, owner. 1-Story reinforced concrete construction, 95x140 ft.—$70,833. ARCHITECT: Binder & Curtis, San Jose. GENERAL CONTRACTOR: Alken Constn. Co., San Jose.

ELEMENTARY SCHOOL, Plymouth, Amador county. Frame and stucco; 3 classrooms, administration facilities, kitchen, multi-purpose rooms, kindergarten, toilet rooms — $157,600. ARCHITECT: Koblik & Fisher, Sacramento. GENERAL CONTRACTOR: Dryden Constn. Co., Stockton.

PAROCHIAL SCHOOL (Lady of Assumption), Carmichael, Sacramento county. Roman Catholic Diocese of Sacramento, owner. 8-Classrooms, administration room, toilet rooms—$141,926. ARCHITECT: Charles F. Dean, Sacramento. GENERAL CONTRACTOR: Guth & Schmidt, Sacramento.

ELEMENTARY SCHOOL, San Clemente, Orange county. San Clemente School District, owner. 8-Classroom, kindergarten, multi-purpose and administration building; frame and stucco, composition roofing, steel sash, slab and asphalt tile floors, interior plaster, forced air heating, black and tack boards, covered passages, acoustical ceilings, slab doors, plumbing, electrical work — $146,900. ARCHITECT: Harold Gimeno, Santa Ana. GENERAL CONTRACTOR: Thompson Constn. Co., West Palmyra.

MEDICAL-DENTAL BLDG., Redwood City, San Mateo county. Dr. Fromm, Redwood City, owner. 1-Story frame construction, wood exterior, 3000 sq. ft. floor area —$45,912. ARCHITECT: Chester H. Treichel, Oakland. GENERAL CONTRACTOR: Stevenson-Pacific Co., Redwood City.

DRIVE-IN, El Monte, Los Angeles county. Tick Tock Burger, El Monte, owner. 1-Story frame and stucco drive-in sandwich stand; built-up composition and rock roofing, plate glass windows, ceramic tile and stainless steel counters, light and power wiring, plumbing, asphaltic concrete paving, concrete pads and ramps; 40x45 ft. ARCHITECT: Anthony & Ellis, Architects and Engineers, El Monte. GENERAL CONTRACTOR: Atkins & Wiggins, Long Beach.

ELEMENTARY SCHOOL (Lewelling), San Lorenzo, Alameda county. San Lorenzo Elementary School District, owner. Frame and stucco, 6 classrooms, kindergarten, outdoor classrooms, toilet rooms—$122,991. ARCHITECT: Schmidts & Hardman, Berkeley. GENERAL CONTRACTOR: Western Empire Constn. Co., Los Altos.

BEER STORAGE BLDG., San Francisco. S. F. Brewing Co., San Francisco, owner. Reinforced concrete construction—$480,000. GENERAL CONTRACTOR: Cahill Bros., San Francisco.

SCIENCE BLDG. (Alterations), **HIGH SCHOOL,** Courtland, Sacramento county. Courtland Joint Union High School District, Courtland, owner. Interior remodel —$20,318. ARCHITECT: Raymond R. Franceschi, Sacramento. GENERAL CONTRACTOR: John F. Otto, Sacramento.

ELEMENTARY SCHOOL (Add'n), French Camp, San Joaquin county. French Camp Elementary School District, French Camp, owner. Frame and stucco, 4 classrooms, remodel toilet rooms — $50,123. ARCHITECT: Mayo, Johnson & De Wolf, Stockton. GENERAL CONTRACTOR: Brad-Stone Constn. Co., Stockton.

SWIMMING POOL, High Schools, Glendale, Los Angeles county. Glendale Unified School District, Glendale, owner. L-shaped swimming pools for the Hoover High School and the Glendale High School; shower locker rooms and appurtenant facilities — $210,800. ARCHITECT: Jas. H. Van Dyke, Los Angeles. GENERAL CONTRACTOR: J. Brock & Sons, Inc., Los Angeles.

OFFICE & WAREHOUSE, South San Francisco, San Mateo county. Milton Meyer & Co., San Francisco, owners. 1-Story reinforced concrete tilt-up construction, wood roof, 70x160 ft. GENERAL CONTRACTOR: Van Bokelen-Cole Co., Oakland.

CLINICAL & SURGICAL BLDG., Los Angeles. Veterans Administration, Washington, D. C., owner. Clinical and surgical building, connecting corridors, roads, walks, mechanical, electrical, utility systems, electric elevators, laboratory and sterilizer equipment and related items—$2,323,000. ARCHITECT: Pereira &

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Luckman, Los Angeles. GENERAL CONTRACTOR: Robert E. McKee, Inc., West Los Angeles.

SAHARA MOTEL, Phoenix, Arizona. Flamingo Hotel Corp'n, Las Vegas, Nevada, owner. Motor-hotel will contain 200 rooms, three dining rooms, bar, kitchen, 11 shops. ARCHITECT: Mathew Trudelle, Phoenix. GENERAL CONTRACTOR: Del E. Webb Constn. Co., Phoenix.

ELEMENTARY SCHOOL (Manchester), Fresno. Fresno Unified School District, Fresno, owner. 12-Classrooms, kindergarten, multi-purpose rooms, administration rooms, toilet rooms — $363,131. ARCHITECT: John P. Miller, Fresno. GENERAL CONTRACTOR: Larson-Ratto Constn. Co., Fresno.

IN THE NEWS

NEW CHURCH

Architects Winslow & Lind of Beverly Hills are working on drawings for construction of a new Church in Inglewood for the Crenshaw Christian Church.

The pre-cast concrete and frame building will contain 16,000 sq.ft. of area, will have a gravel roof, concrete slab floor, forced air heating, stone veneer and concrete tower.

DRIVE-IN SANDWICH

Architects Anthony & Ells, engineers, of El Monte are preparing drawings for construction of a 1-story, frame and stucco drive-in sandwich stand in El Monte. The 40x45 ft. building will be of built-up composition and rock roofing, plate glass windows, ceramic tile and stainless steel counters, and concrete paving, pads and ramps.

SWIMMING POOL

Enginer Clair A. Hill of Redding, has completed plans for construction of a swimming pool for the Anderson Union High School District of Anderson, Shasta county. The pool will be of reinforced concrete construction.

TURLOCK HOSPITAL PLANS ADDITION

The Emanuel Hospital in Turlock is completing plans for construction of a surgical and obstetrical wing addition to the present building.

The new addition will consist of a two-story "wing" with basement, and will be Class A, reinforced concrete construction.

Donald Powers Smith of San Francisco, is the architect.

PABCO TO BUILD ANOTHER PLANT

Pabco Products Inc., San Francisco, announces it will soon start construction of its eighth manufacturing plant, which will be located near Newark, California.

W. H. Keady, president of the company, announced the new plant would produce gypsum wallboard; lath and sheathing and is expected to be in production by January 1956. It will cost approximately $2,500,000.

PLASTER MASTER APPLICATION MACHINE

The first commercially successful plastering machine not limtied to use of lightweight aggregates, is known as a volume machine that handles plaster containing half sand as the aggregate and pumps up to 3½ cu. ft. per minute.

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COUNTRY CLUB TO BUILD SWIMMING POOL

The Stockton Golf and Country Club recently announced plans for construction of a 36 x 75 ft. reinforced concrete swiming pool on the Club's property near Stockton.

Architect Burnes Schroder of Berkeley is completing drawings for the project.

SCHOOL BONDS APPROVED

Voters of the Exeter Union Elementary School District recently approved the issuance and sale of $275,000 in school bonds for the construction of a new Elementary School building in Exeter.

The new school plant will comprise 12-classrooms, home making room, music room, kitchen, and toilet facilities.

SMOOT HOLMAN MAKE PERSONNEL CHANGES

Two key posts in the Smoot-Holman Company, manufacturers of commercial and industrial lighting equipment, have

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been filled by recent appointment of Leonard A. Hobbs, vice president.

C. E. Smoot, Jr., formerly District Sales Manager in the San Francisco office, has been named Sales Manager in the home office in Inglewood, California, and M. P. Fenton, previously in the Sacramento office of the firm, has been named District Sales Manager in San Francisco.

ARCHITECT SELECTED

Architect John W. Bomberger of Modesto has been commissioned by the Modesto Unified School District to draft plans and specifications for construction of a new Science Building at the Modesto Junior College.

Harry J. Devine of Sacramento was also named supervising architect of the project.

SCHOOL BONDS APPROVED

Electors of the Branchiforte Elementary School District and the Santa Cruz High School District approved issuance of $1,040,000 in school bonds for rehabilitation of the school buildings at a recent special school bond election.

KRAFTILE COMPANY HONORS EMPLOYEES

Two members of the Kraftile Company at Niles, California, recently attained a record of 29 years each of continuous, practically full-time employment.

Tony Janeiro, Jr., pug mill operator, started with the firm in 1926; and Joseph C. Delagado, employed in the finishing department, joined Kraftile in 1926. Both employees achieved 98% full employment or better during the 29 years.

NEW ORNAMENTAL LAMP DESIGNS

Outdoor lighting in a grand manner is now available thru new lamp designs furnished for flush-to-wall mounting or for attachment to corner of structure to provide lighting on both sides of building.

These lamps add charm to any home, apartment house, business building; lamp and decorative bracket fit together to form one-piece construction; installed protrudes approximately 20 in. and is about 35 in. in overall height; installation simple and quick, on wood, masonry walls or any type construction. Manufactured by Tennessee Fabricating Co., 1490 Grimes St., Memphis, Tennessee.

MAMMOTH FURNACE CO. NAME OAKLAND DEALER

The John L. Stewart Company of Oakland, California, has been appointed manufacturer's representative for the Mammoth Furnace Company of St. Paul, Minn., and their line of furnaces and space-heaters.

Stewart will represent the St. Paul firm in Northern California and Nevada, except Clark county.

SCHOOL BLDG

Architects Miller, Wilson, Smith and Turner of Las Vegas, Nevada, are completing plans for construction of a new school building in Mesquite, Nevada, for the Clark County Education District #1, Overton, Nevada. The building will contain seven classrooms, administration unit, auditorium, lunchrooms, and library.

COURT HOUSE

The San Diego county board of supervisors recently commissioned the following architects and engineers to prepare plans and specifications for construction of the new County Court House which is to be built in the City of San Diego.

Architect Frank L. Hope, will serve as chairman and liaison officer of the participating architects and engineers who include George Lykos, Sam W. Hammill, Richard G. Wheeler, and E. L. Freeland, structural engineer.

Offices for the project have been opened with George Devine in charge.

RIFLE RANGE

Architect Arthur Froellich of Beverly Hills is completing plans for construction of final phases of the Military Wing and Rifle Range of the University of California at Riverside. Estimated cost of the project is $210,000.

MENS DORMITORY

Architect Welton Becket and Associates of Los Angeles, are completing plans for construction of a masonry men's dormitory building in West Los Angeles for the University of California at Los Angeles.

The new dormitory will provide accommodations for 600 men students.

LONG BEACH HOSPITAL

Architect Hugh R. Davis of Long Beach has completed plans for a 2-story concrete and masonry hospital to be known as the Long Beach Osteopathic Hospital, Inc.

It will contain 45,000 sq.ft. in area, have composition roofing, lightweight concrete flooring on steel decking, forced air heating and refrigeration, air conditioning,

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aluminum sliding sash, interior plaster, acoustical tile work, ceramic tile work, asphaltic concrete paving; and will cost an estimated $1,254,000.

ANNIVERSARY FOR SIMONDS

The Simonds Machinery Company of San Francisco and Los Angeles, recently published an Anniversary Brochure commemorating the 50th anniversary of the firm in the pump business on the West Coast.

Profusely illustrated the booklet tells an interesting story of fifty years of business activity which includes the great quake and fire of 1906, the depression years, and two world wars. It is also a review of management and personnel which maintained a vision of growth and development that has kept pace with industrial and commercial expansion of the west.

NEW DISTRIBUTOR FOR ROLSCREEN

The Pella Sales Company, a newly formed corporation headed by Leon B. Roegiers, San Francisco, has been appointed to handle the Rolscreen Company of Pella, Iowa, products in this area.

Installations of the new Pella Wood Folding Doors may be seen in San Francisco Bay area; complete information available from the firm's offices at 111 New Montgomery Street.

MODERNIZE CITY HALL

Architect Marion J. Varner of Pasadena is preparing drawings for construction additions and modernization of the Hawthorne City Hall in Hawthorne.

The work involves adding new council rooms and council chambers on the first floor and small second floor administrative area providing 3000 sq.ft. of new floor space in all. Conversion of existing council chambers to an office, and general interior alterations of other offices. Construction will be frame, stucco and pre-cast panels, wood rafters, steel or aluminum sash, electrial and plumbing work.

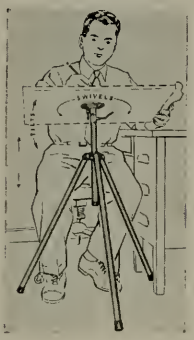
DYER APPOINTED DISTRICT MANAGER

Frank Dyer has been appointed district manager in charge of sales for Mosaic Tile Company, Los Angeles office, according to an announcement by Thomas B. Jordan, Western Manager.

Dyer was a tile contractor prior to becoming associated with Mosaic.

FLOOR MODEL DRAWING STAND

Attach any board to the new "Safe-Lock" drawing stand and use in the home, office, school or studio for drawing, painting, planning, or sketching.



Tilts and locks in any position; impossible for table to slip or tilt; adjustable to sitting or standing height; assembly removes easily from stand and is easily replaced by another board without disturbing work on the boards. Manufacturer Arsco American, Inc., 3308 Edson Ave., New York 69, N. Y.

OFFICE BLDG

Architect Wm. Edward Schirmer of Oakland is working on drawings for construction of a new office building in the City of Alameda for the First Savings & Loan Association of Oakland.

The new building will be 1-story, with

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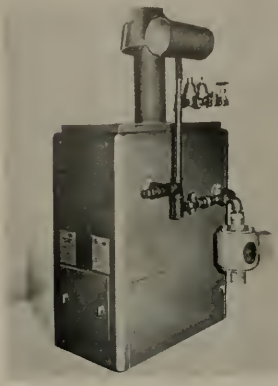
mezzanine, concrete block and frame construction and will contain 65x80 ft. of floor area. Estimated cost is $100,000.

NEWLY DESIGNED HOT WATER HEATER

The Ward Heater Company announced the marketing of a newly designed gas-fired hot water heating boiler for radiant, convector, baseboard and all closed systems.



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GENE BLISS NAMED DIVISION MANAGER

Gene Bliss has been appointed manager of the Stain Division of the Olympic Stained Products Company of Seattle, Washington, according to an announcement by Burr Odell, general sales manager of the firm.

Bliss will maintain offices in Seattle He formerly resided in Los Angeles and Sacramento, and was graduated from the University of California.

VETERAN'S HOSPITAL

The Bureau of Budget, Washington, D. C. has approved the expenditure of $8,000,000, authorized by Congress, for construction of a new wing to the Veterans Hospital at Long Beach.

The wing will have 562 beds and will replace an existing wooden section of the hospital.

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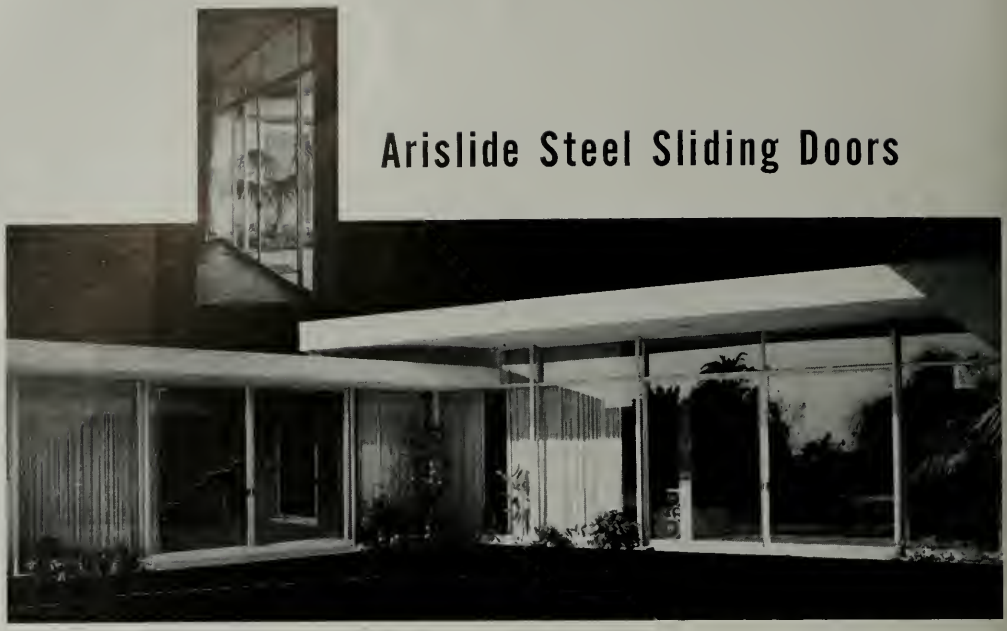

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COVER PICTURE

Residence of
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Morgan Shaw, Architect

Twentieth Century architectural style is seen in this modern California home in the San Joaquin Valley of California.

Architect Morgan Shaw has created a practical home by use of many of the new building products.

For complete details see page 9.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

"OPERATION CUE"

The recent "Operation Cue" atomic blast damage tests on residences at Survival City, Nevada, obviously proved a number of very conclusive facts . . . that reinforced construction, for example, is better than non-reinforced construction, regardless of the building material used, a fact which was well known prior to the tests, but certainly substantially proven.

One of the objectives in submitting residential construction to the atomic blasts, however, was to determine how present home construction would fail under the terrific pressures of an atomic blast, so that the Federal Civil Defense Agency, together with architects, engineers, builders, and building material manufacturers could devise better means of future home construction to withstand atomic blasts, and therefore typical residences such as two-story brick, cinder block, precast concrete slab, and frame houses were used.

In commenting on "Operation Cue," Harold L. Goodwin, Federal Civil Defense Agency official and an eyewitness, told a meeting of construction industry executives in Los Angeles, "There is evidence that simple reinforcing would have made a great deal of difference at Survival City. We hope in the future to conduct some tests using California earthquake-resistant brick design, a form of reinforced brick masonry, and we have no reason to believe that it will not be just as strong as reinforced concrete."

Sufficient to point out here, however, is the fact that the terrific force of the shattered glass would have killed anyone in an exposed position in any of the test houses and the only hope of survival would be for residents provided with some specially protected shelter.

The residential construction industry is faced with what is probably its greatest challenge . . . the development of atom blast safe homes at a low cost, plus the tremendous task of awakening the American people to the known dangers of atomic destruction and the available measures which can be taken for protection.

* * *

Americans probably carry more insurance than any other people, with life insurance policy holders numbering more than 90-million.

* * *

BUSINESS BOOM TO CONTINUE

Present trends indicate the current business boom will continue well into 1956, is the belief of officials of the National Chamber of Commerce, who based their forecast on the thriving construction industry "now out-performing the most optimistic estimates of last November"; a steady increase in the money supply; the general recovery of Europe, Latin America and Asia, and the "virutally full" employment throughout the United States.

The construction industry is quite generally accepted today as the "bellwether" of business with current expenditures running well over the $41-billion per year mark . . . a figure which is about $2-billion to $3-billion above top estimates of last year.

Supporting this volume is the prospect of huge public works construction by state and local governments, and the ever increasing need for expanded public utilities, industry and commerce, and educational facilities.

* * *

One-fourth of all lumber produced in the U. S. is said to be produced within 300 miles of Redding, California, an area including much of Oregon, Nevada and northern California south to Yosemite.

* * *

BIG AND SMALL BUSINESS

There is an unfortuate school of thought current today which thinks of big business and small business as somehow opposed to one another.

Many people fear that big business grows at the expense of small business. They see an imagined trend toward monopoly, toward the absorption of small business by the giants, toward the destruction of competition.

If these fears were founded in fact, there would indeed be cause for alarm, but a brief examination of the statistical evidence on this point demonstrates that they are not.

The business population has been growing at a rapid rate for a long time. In 1900, there were 21 independent business establishments per 1000 population. By 1930, this figure had increased to 24, by 1940 to 25 and by 1950 to 27.

There is even a tendency of big business to increase the need for small business, as many big establishments are primary assemblers of the countless products and parts of small concerns.

More than half the total proceeds for sales of General Motors last year went to some 21,000 independent suppliers of materials and services, the majority of whom are small. General Electric has over 33,000 suppliers and sub-contractors, many of whom are in turn dependent upon sub-contractors.

So! When all the factors are considered, it does little credit to express the fear that the days of small businesses are numbered. The evidence of the past and needs of the future dictate a continued, ever expanding existence.

BUILDING WITH THE WEST

TECHNICALLY SPEAKING

WOODWORK INSTITUTE OF CALIFORNIA

WHAT MAKES GOOD MILLWORK SPECIFICATIONS?

By LES HARTER, Technical Consultant, Woodwork Institute of California

A constantly re-occuring question is "How do I write good millwork specifications?"

Perhaps the very nature of specification writing, and most certainly the past experiences of those of us who would offer an answer to this question, presents a most tempting invitation to submit an answer in a completely negative vein. It appears that most of the advice is "don'ts"—things that have been done that should never have been. Let us, however, begin with a few "dos."

First, determine what millwork is. Perhaps the lack of this determination is the primary and greatest evil of the average spec writer. Let your criteria be a simple one—contain within the scope all the items and all the labor supplied by the one vendor called the millman. Do this, and no more. Consider the structure as it is to be completed, and, as millwork items are required on the job, list and specify them in that order. Begin with Exterior Frames, continue through Exterior Finish, Windows and Sash, Doors, Interior Finish, Cabinets and Casework, Paneling and Wood Decorative Wall Coverings, Stairwork, Screens and Shutters and Louvers, Laminated Plastics, and end your specifications with Preservative and Delivery and Guarantee Requirements, and stop there. Do this, and no more.

From the days when the present day mill was called a carpenter shop, when the men who were the fore runners of our present day highly technical specialists in millwork, it has been the custom to use "millwork" as a sort of catch-all—a place to put the little bits of specifications that couldn't seem to go elsewhere conveniently, or that specification writers were actually too lazy to search for their proper category.

Be sure that this can no longer be. Millwork, Architectural Millwork, is truly a clearly segmented part of the building industry, containing within its scope none of the conditions of Finish Carpentry, Rough Carpentry, or Miscellaneous Articles not elsewhere classified.

It sometimes appears to be needless repetition, but, at the risk of boredom, be again reminded that there is an active functioning organization set up for the specific purpose of assisting in the proper specification of Architectural Millwork.

The Woodwork Institute of California has carefully set forth in its Manual of Millwork the categories mentioned above, and has further well defined the scope of each category. In addition, so that the specification writer need not concern himself with the impossible task of having and using sufficient technical knowledge to set forth all the material and machining standards necessary to produce good millwork, these too have been clearly defined and described.

Then use the Manual. When it is necessary to call for stock double-hung window frames, for example, never feel it necessary to detail profiles of sills, or tell the mill how to machine the members. The proper principles of design and manufacture of stock double-hung windows and their frames have been so well established through the past decades that it would be impossible for you to buy a poor window ensemble from any reputable manufacturer. But when you attempt to impose the minute and often not-so-important details of one manufacturer upon another, you immediately create a "special" frame, with an attendant increase in cost, and for no good purpose. Similar needless specification writing and detailing could be extended through all the categories of millwork, and for as little value.

Now it is true that there will be special conditions for almost any job. It is also true that the millwork industry manufacturing architectural millwork would place no restrictions on the originality and design license of the architect. The industry would ever ask that you use the versatility and the flexibility and the personality of wood to the fullest extent—those are the qualities we love. But we recoil instinctively from a needless increase in cost, and we constantly battle against improper use of wood. So use the Manual. Know that it is right, written for you, and all encompassing in its scope, and your best guarantee against poor materials and poor workmanship. We need the Manual. We need the "holding in line" that it provides, and we doubly need the Manual that we may have a common reference with you—one that we both understand and can rely on.

(See page 35)

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering the following special exhibitions and events during the month of July:

EXHIBITIONS—English and Irish Glassware, bequest of Julia May Babcock; "I Remember Mama," costumes and accessories of the late Victorial and Edwards periods; California Designed, an exhibit of home furnishings and accessories; Goya, Drawings and Prints, from the Museo del Prado and the Museo Lazaro Galdiano, Madrid, and the Rosenwald Collection, National Gallery of Art, Washington, D. C.; an exhibition of Children's Museum Class work—ages 9-14—in the Cihldren's Room; My Memoirs, paintings by Cosmy; European Impressions, Paintings and Drawings by Antonio Sotomayor; and Thirteen Watercolors, the 20th annual.

SPECIAL EVENTS include Free Film Showings; Free Lectures; and Classes in Art Enjoyment. For Adults, Seminars in the History of Art, Thursday mornings 10:30-11:30; Painting Exercises for Beginners, Saturday mornings 10:30 A.M. to noon, and Thursday afternoons 1:30-3:30; Painting Workshop for Amateurs, Saturday 1:30-4:40 P. M. For the children, classes in Picture Making, ages 4-8, Saturday 10:15-11:30 A.M.; Art and Nature, age 9-11, Wednesday 3 to 4:30 P. M.; and the Art Club, age 12-15 each Thursday 3 to 4:30 P. M.

Museum is open daily.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an Exhibition of French Painting and a Guest Exhibit of Painting by Arturo Meruvia of Bolivia during July.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., will exhibit a number of special exhibitions in July, among them:

SPECIAL EXHIBITIONS—Recent Terra Cottas by Adeline Kent; Thirty-five French Paintings of the late 19th and early 20th Centuries; World at Work, an exhibition of paintings and drawings commissioned by Fortune, presented on the occasion of the magazines's 25th anniversary, and sponsored and circulated by the American Federation of Arts; Paintings by Muriel Bacon; High Style and Chinese Art; and Paintings by John Emmett Gerrity.

The Achenbach Foundation for Graphic Arts exhibit at the Museum will highlight East Meets West, an exhibit showing the influences in Japanese printmaking, and America Today, an exhibit by contemporary artists. The Loan Exhibition at the San Francisco Public Library will feature Early San Francisco.

SPECIAL EVENTS—Organ program each Saturday and Sunday at 3:00 P. M. Summer painting classes for children, ages 6-14, will be held each Tuesday and Thursday at 10 o'clock, starting July 12. An introductory class for adults desiring instruction in contemporary approaches to painting will be held on Saturdays at 2 o'clock, beginning July 16.

Museum open daily.

SANTA BARBARA MUSEUM OF ART

The Santa Barbara Museum of Art has announced that its exhibition will open to painters of the Pacific Coast. The exhibit which includes paintings in all media and water colors, will open in the Santa Barbara Museum of Art on September 22 and will be on view through November 6, 1955.

The three man jury will be composed of Perry T. Rathbone, Rufino Tamayo, and Wright Ludington.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is offering the following exhibitions and events during July:

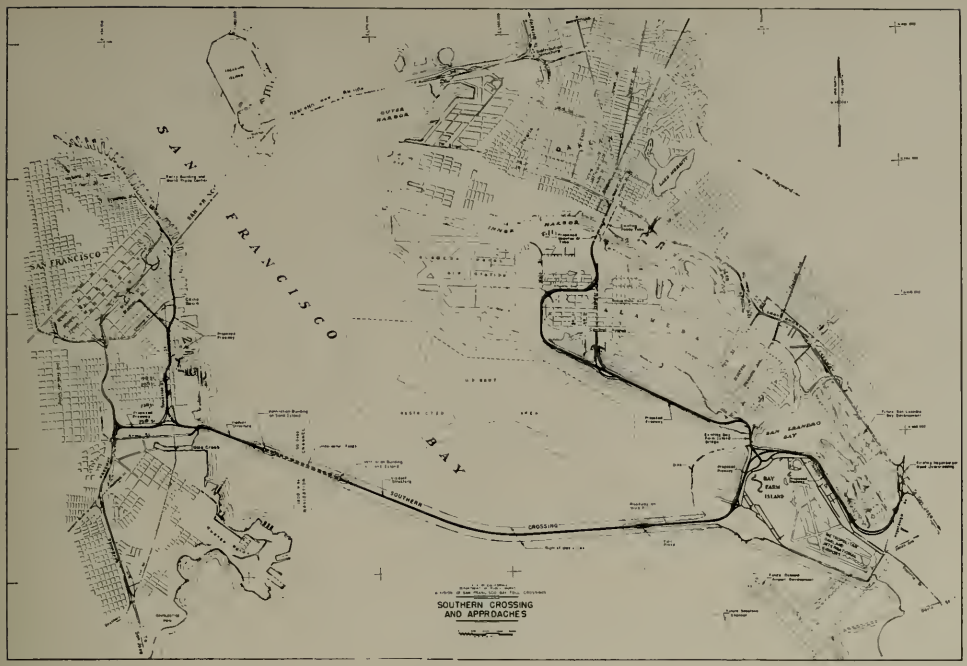
EXHIBITIONS—Paintings by Max Beckman; John Marin Memorial Exhibition; German Expressions in Prints; Sculptures by Wotruba of Austria; Art in the 20th Century; and We The Peoples.

EVENTS—Lecture-Tours each Sunday at 3 P.M.; Gallery tours each Wednesday evening at 8:30 P. M. Classes in Art for the Layman will be resumed in September.

The Museum is open daily.

GLASSWARE EXHIBIT

Selected pieces of English and Irish glassware of the 18th and early 19th Centuries, from the collection of the late Julia May Babcock of San Rafael, California, recently bequeathed to the M. H. deYoung Memorial Museum in San Francisco, will be shown for the first time beginning July 1, 1955.



Proposed Solution of San Francisco-Oakland Bay Area Motor Vehicle Traffic Problem

THE EFFECT OF THE DOLWIG ACT

By GEORGE S. HILL,
Consulting Engineer

This article is written in the belief that the effect of the Dolwig Act on Bay Area rapid transit is not generally known or understood. This Act, relating to a Southern Crossing from Army Street in San Francisco to Bay Farm Island, by giving priority and exclusive rights to tolls, will destroy the principal source of revenue for financing a Bay Area transit system. The Dolwig Act is in conflict with the California Toll Bridge Authority Act, which provides for sharing the revenues from the Bay Bridge to permit extension of the Bay Bridge rail lines for a distance of 50 miles from either end of the bridge, with provision for subways, underpasses, equipment, and all things necessary for operation, including operation itself. The Dolwig Act provides that all joint revenues from the Southern Crossing and the Bay Bridge, after deducting costs of maintenance, operation, and insurance, are to be pledged for payment of principal and interest of the Southern Crossing bond issue. A very disturbing factor is the inordinately high cost of the Southern Crossing with its western terminus at Army Street.

The cost of the Southern Crossing as now proposed will be well up in the stratosphere. Unofficial estimates place the figure at $300,000,000, of which the crossing itself will cost $200,000,000 and the five sections of approach freeways, $100,000,000. In comparison, the Panama Canal cost $525,800,000, and the assessed value of all of the land in San Francisco is $368,547,795. Although the Southern Crossing is expected to have only about 20% of the traffic of the Bay Bridge, it will cost more than all three of the bay bridges combined, namely: the Golden Gate Bridge, $36,000,000; the Bay Bridge, $75,000,000; and the new Richmond-San Rafael Bridge, $72,000,000—total, $183,000,000.

The Progress Report on the Southern Crossing, recently issued by the State, discloses some astounding facts. The quoted passages are taken from it, verbatim.

"It should be noted that this particular location had not been previously considered in any official engi-

neering report. All previous reports by State and other governmental agencies had contemplated that any crossing from Army Street in San Francisco would have an easterly bridgehead on the south shore of the City of Alameda, approximately three miles northeast of the Bay Farm Island terminus."

The application of the Department of Public Works for a crossing on a direct line between Army Street and Bay Farm Island was denied by the Department of the Army on November 3, 1953, because it would interfere with the seadrome expansion.

"The question then arose as to whether the Department of Public Works could or should, under the terms of Chapter 1056 [The Dolwig Act] broaden its studies to embrace other crossings with termini in San Francisco as far south as Candlestick Point. This question was referred by the Director of Public Works to the Attorney General of the State of California, who rendered a formal opinion on December 15, 1953.

"This opinion, in brief, required the Department of Public Works to submit a revised application to the Department of the Army for a line swinging several thousand feet south of the proposed tangent crossing, thereby avoiding the restricted seadrome area, but retaining the same termini as defined in the statutes."

Although this location was approved, such approval was permissive only, and was not a mandate to construct the crossing. The arbitrary manner in which the site was selected is most unfortunate and entirely without precedent from the engineering standpoint. The Dolwig Act itself provides for financing "to the end that the best facility designed to meet traffic needs will be constructed at the lowest possible cost."

Engineers pride themselves on their ability to solve most any engineering problem assigned to them, and yet the extravagant nature of this crossing led one eminent engineer to remark that one could build a bridge over the Pacific Ocean if given money enough. Although inflation is a factor in present day costs, the excessive cost is apparent from a description of the work involved.

"The general foundation conditions on the overwater crossing are described briefly as follows: The surface layer of mud, a recently deposited sediment, is from 20 to 60 feet thick. It has been described as a soft, compressible, and unstable mass. Underlying the soft mud are alternating layers of clay and sand and intermixtures of both, which become progressively stronger with increased depth. At the locations where the proposed sand islands would be built the water is from 40 to 60 feet deep. The zone of soft unstable, silty material of high moisture content extends to a depth of about 125 feet below sea level. It would consolidate greatly under direct load and in addition would be displaced by any additional fill placed above it. This soft muck must be removed and replaced with something more stable to support the tube section and the transition sections of the Southern Crossing.

"At no place along the transbay alignment can bedrock be reached within a reasonable depth; however, other suitable bearing strata are encountered.

"The total quantity of sand required as hydraulic fill for the Southern Crossing and approaches is tentatively estimated at about 15 million cubic yards."

The total length of the main crossing, planned as a six-lane freeway, will be 7.71 miles. From the Army Street terminus it will extend down the Bay for a distance of about four miles before curving eastward to Bay Farm Island. The Bay Tube itself will be 1.1 miles long between the two ventilation buildings. These buildings and the transition sections leading to the tube are to be located on two artificial sand islands, one on each side of the shipping channel. The tubes will pass under the channel providing a minimum of 50 feet clear depth of water for a distance of 1500 feet. Vehicles will reach the islands from the San Francisco shore by a low trestle viaduct and from Bay Farm Island first over a mole causeway and thence by a low trestle viaduct. The sand islands when built to their full height will be as much as 130 feet above the bottom of the trenches. Above the mud line the sand slopes will be protected against scour by a rock fill.

"Building the large islands in the relatively soft Bay bottom mud presents a formidable problem which is greatly complicated because settlements after construction must be minimized. If these settlements are large, the tubes may be subject to serious damage or destruction."

The fact that we live in a region periodically subject to severe earthquakes renders such settlements as a distinct possibility.

The Bay Bridge rail line is the only direct rail connection San Francisco has with the continental side of the Bay, and we are in danger of losing even that unless we avoid needlessly extravagant expenditures which tend to weaken our economy. A low-level crossing south of Hunters Point, originally proposed by Congressman Richard Welch, is a logical choice and would cost about half as much as one north of it because no underwater tube would be required and the main shipping channel could be reduced from 1500 feet to 450 feet. The saving in cost would in all probability be sufficient to finance an initial Bay Area mass transit system in both San Francisco and Oakland, and also make it possible to bring lightweight main line trains directly into San Francisco.

Much of the engineering study already made would be applicable to a revised location. The Bay Farm Island terminus might be the same. Although the route would be somewhat longer to the Central Business District of San Francisco, it would be considerably nearer to the new produce market site, the apparel center, the farmers' market, and the proposed new industrial sites to be created by filling in the tidelands between Hunters Point and Candlestick Point. The Southern Freeway crosses the Bayshore Freeway a mile and a half southwest of the proposed Army Street crossing, which then proceeds in an east of southeasterly direction four miles before turning due east to Bay Farm Island. The map of San Francisco shows

(See page 36)

ENTRANCE COURT

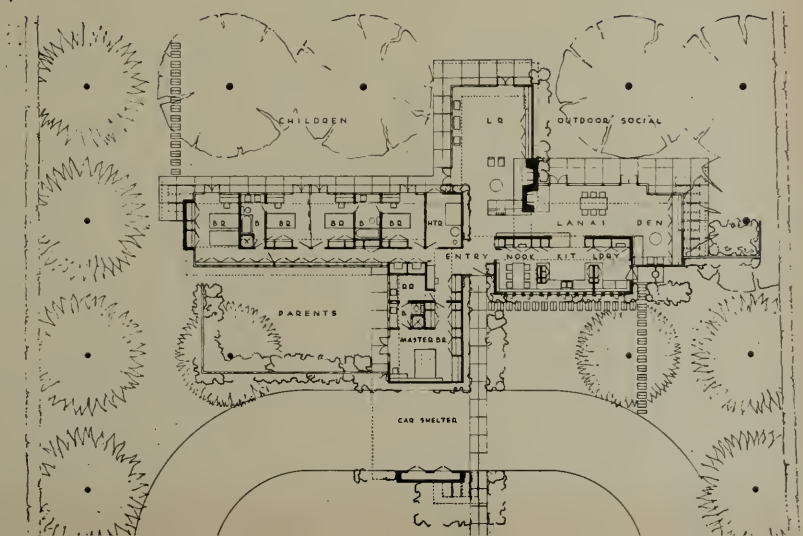
TWENTIETH CENTURY ARCHITECTURAL STYLE

CALIFORNIA RESIDENCE

DR. & MRS. SIDNEY S. AMES
Fresno, California

ARCHITECT - - - MORGAN SHAW
Berkeley

SITE PLAN



CAR SHELTER
MAIN ENTRANCE
& KITCHEN WING

as seen from street. Vines will grow on masonry wall of car shelter and spread on overhanging trellis.

MAIN ENTRY

Looking toward
Living Room

Entry has cork flooring and Living Room is carpeted. Ventilation, an important consideration in the San Joaquin Valley, is accomplished throughout the house by the use of awning sash arranged in vertical or horizontal banks.

CAR SHELTER & MASTER WING

Parents have own private patio, fenced from drive.

MAIN ENTRY . . . from the interior.

Dr. and Mrs. Sidney Ames of Fresno were desirous of owning a home designed in the manner of the latter half of the Twentieth Century and wanted to avoid all false and meaningless affectations of the past and present, whether they be English Tudor, Spanish or Dutch Colonial, or Contemporary Hill-Billy.

They were desirous of utilizing the best and most modern mechanical, electrical and other engineering equipment, at the same time achieving a visually distinctive environment for themselves and their three growing children.

Preference was expressed for a separate zone (each involving indoor and outdoor spaces) for each of the following: 1) Parents' Bedroom and Bathroom and

VIEW OF DEN . . . from Lanai at night. Television, radio and record player are among the built-in features.

Guests' Dressing Room: 2) Children's and Maid's Bedrooms and Bathrooms; 3) General Family Living Room; and 4) Den or Social Room, to be closely integrated with Dining, Cooking and Service facilities.

The Plan developed has four wings arranged in such a way as to meet the Owner's requirements and each with its own outdoor extension of space. Entry and air conditioning equipment are in the center; extended bedroom wings offer necessary privacy and quietude. Passageways, where required, are provided with generous but much needed built-in storage cabinets.

A great deal of the furniture was designed and built-in by the Architect: wardrobes, headboard, desk and dresser in each bedroom, seating accommodations by the large fireplace, television, radio and record player cabinets in the Den, Dining facilities and several other items. In this manner, a harmony of materials and details were accomplished and the furnishings seem a part of, and integral with, the house.

The severe summer climate of Fresno demanded special considerations. The Owners had purchased a fine lot of generous proportions and excellent orientation (south of the street) and it was therefore possible to open all sleeping and sitting rooms to the South or East and away from the street by the use of full length fixed glass and glass doors. Western walls are all solid and fenestration on the street side is kept to a minimum. Solar control is achieved by the use of broad, low overhangs which not only offer fine protection but are, at door-head height, very much in human scale and harmonize with the general terrain of site and region. These overhangs (or soffits) extend about two feet into the interior spaces and be-

(See page 34)

LANAI as seen from the Den . . . showing fireplace and Serving Bar. Walls are concrete masonry, siding of glass; flooring is cork tile. In general, throughout the house, artificial light comes from the same direction as natural light, making furniture arrangement as useful at night as during the day.

LIVING ROOM

From Garden Side

Fireplace has two-way exposure and is provided with a built-in seat and open shelving for books, magazines.

Upper ceilings in all rooms finished with a light colored fiberboard.

DINING NOOK, KITCHEN, LAUNDRY

Furniture and appliances are built-in —space is preserved and made to flow by such devices as continuous fascias and counters.

A BANK BUILDING THAT SMILES INTELLIGENTLY

FROM DESERT TO GLAMOR

SAN FERNANDO VALLEY FEDERAL SAVINGS AND LOAN ASSOCIATION

San Fernando, California

By KERSEY KINSEY

ARCHITECTS:

HUTCHINSON, KINSEY & BOEKE
(Alfred A. Boeke, Architect)

JOHN HUTCHINSON,
Designer

In the third act of Hamlet, scene 1, the passage goes, "Now see that noble and most sovereign reason, like sweet bells jangled, out of tune and harsh". It would seem as though this philosophy might apply to building modern glamour in the midst of what was once an arid desert area somewhat near the center of San Fernando Valley in Southern California. However, with the versatility which has characterized the transformation of sand to utilitarian beauty, the San Fernando Valley Federal Savings and Loan Association has built an edifice that is a tribute to them and everyone else connected with its erection.

According to many in the construction industry the word "commercial" has an interesting connota-

tion and is one that could be contemplated at length.

The modern theory proclaims that a building should be designed and built to serve a certain purpose and a specific function and that was the motivation behind the designing and construction of this building.

The building is located at 6842 Van Nuys Boulevard, Van Nuys. The architects were Hutchison, Kinsey & Boeke (Alfred R. Boeke, Architect), of Studio City. The designer was John Hutchison.

The entire objective in the design and construction of this building was to achieve an ultimate successful ending to the profit and loss story of the owners and to perpetuate the feeling of delight on the part of the stockholders with the management of the association.

Since the erection of the structure, new accounts and new business of all descriptions characteristic of a savings and loan association have been coming in to a most surprising degree. The upsurge in business volume can be traced directly to the "come hither" character of the building. Being structurally and functionally correct, it satisfies the insistent demands for permanency. Being architecturally designed in an attractive modern manner, it gives to the commercial venture an aesthetic interpretation that has made it

Convenient access to all areas.

VIEW OF OUTSIDE WALL

Showing thermo controlled louvers, ond glazing done with the newest developed store front materials including plate gloss.

outstandingly successful.

A bright and cheery efficiency is suggested by the very shape and color together with the sunny treatment of the building itself. This reflects a character in marked contrast to the grumpy austerity of bank buildings of another era. It is said of this building that it smiles intelligently. As surely as a bridge must be designed to carry a specific load, this structure was designed to perform specific functions. The most important one of these was to induce people to step inside and do business. A feature shown clearly in the photograph on page 14, is the louvers mechanically admitting light but never a glare. These louvers are thermo controlled by photo electric cells for complete sun protection.

The entrances are the newly designed, long lasting, light and easy operating hollow tubular doors as shown in bottom illustration on page 16. Special push plates are in evidence and modern type door holders are in the top rails.

An examination of the building indicates the high priority on public convenience, maintenance problems and operating efficiency. Structurally sound materials with no upkeep factor were used throughout

ALL PHOTOGRAPHS BY JULIUS SHULMAN, COURTESY OF KAWNEER COMPANY.

the virtually maintenance-free building. The overhang permits the use of a patiolike walkway, giving a definite friendly and suburban character to the structure. The entire design was matched to climatic, efficiency and economical considerations.

The plan stresses the fullest possible use of and access to all areas (see photo on page 15). Patrons may enter via a covered arcade from the 180-car parking lot or use drive-in banking services. Unusually large parking stalls and widths of bays guarantee freedom of movement and safety from mishaps.

The luminous ceiling illustrated in the upper photograph on page 17, is implemented with instant-start fluorescent lamps above corrugated plastic. These provide uniform light for eye ease. The ceiling also incorporates concealed air conditioning ducts for the building's carefully engineered air flow system. The reinforced gypsum slab roof has excellent insulating qualities.

The outside wall with the thermo controlled louvers, indicated in the upper photograph on page 16, shows glazing done with newest store front materials and specially selected plate glass. The dark panels are emerald-pearl granite imported from Norway and glazed in the same fashion as glass. Floor covering is terrazzo, cork, rubber and asphalt tile used

(See page 34)

LUMINOUS CEILING illustrated above is implemented with instant-start fluorescent lamps above carrugated plastic.

PANEL and materials blended for harmonious effect.

RESIDENCE Frank M. White, Portland . . . JAMES GARDINER, Architect.

Glamor Comes To WESTERN BEDROOMS

By ARTHUR W. PRIAULX

Western architects, in recent years, have come more and more to the conclusion that comfortable bedrooms, far from being an indulgence, are just as important to health and well-being as fresh air. With that premise in mind, they have designed bedrooms to fit in the theme of the contemporary western architecture which rival any other room of the home.

If the bedroom is deserted from morning to night, it's a sure sign that it rates very low on creature comforts and attractive surroundings.

A checklist applied to a bedroom acceptable to most families would develop this formula for the near-perfect bedroom. It should be designed so that it is relaxing, where its owner can read, write or sew when he wants to slip away from the family. It should be handy and convenient, with as much storage packed into the walls and headboards as possible. It should, in many cases, be a combination sleeping-sitting room. It should be a room that is attractive and restful and one that is relatively easy to keep up.

Designers have developed some very interesting solutions for these combination requirements even in the smallest bedroom. By turning to the walls for storage, it is possible to eliminate the dressers and exposed chests of drawers which formerly took up much floor space and upkeep and instead turn this area into built-in desks, work tables, study walls and dressing rooms.

Short walls in the entrance between bath and bedroom offer particularly attractive and useful wall surface for storage built-ins. Even a corner of a bedroom can be turned into a compact dressing room with dressing table and wall mirrors, taking very little space.

When you enter a bedroom like the one Architect Richard Sundeleaf designed in the Gordon Carey home in McMinnville, Oregon, see page 24, you relax the minute you step inside. The smooth lines of this room's full wall of built-ins beneath wide windows is so even there is no jarring note, and these same flowing lines continue on to the made-to-order headboard. The entire installation and two panelled walls of this room, which contrast well with alternate masonry walls, are of west coast hemlock, finished clear.

Flush doors shield compartments for telephone, radio and books in the headboard and release to touch, being held by concealed latches. The full drawers along the wall have sloping fronts with catch holds underneath so there are no marring knobs or drawer pulls.

A rather similar bedroom designed by Architect Thomas Balshizer in the Norman Richards home in Cottage Grove, Oregon, see top of page 21, puts the headboard to even more active use than is the case in the Carey home. Sliding panels conceal several storage compartments for this double-decker headboard which provides ample space without crowding for books, radio, lamps, clock and telephone.

A feature of this particular room is a dressing room built into a small L-shaped corner. Two walls of this area have been converted into storage, with drawers below and sliding doors above concealing shelved storage for blankets and comforters. A dressing table has been custom-built. West coast hemlock has been used effectively in this room and it too has been finished in clear rez to retain the natural texture, grain and coloring of this wood.

A twin bedroom for children of similar age groups can be designed to give each child his own private domain, such as in the Nils Hult home in Eugene which was done by Architect Clare Hamlin, see page 20. With four girls in the family, two identical bed-

BUILT-IN HEADBOARD of hemlock to match delicate trim adds just the right touch of charm to this bedroom designed by architect Clare Hamlin in Nils Hult home, Eugene, Ore.

rooms were built with a fixed room divider in each. The room divider contains identical shelving and storage areas on each side, gives each child a sense of being queen (or king) in her own haven. This room divider of matched Douglas fir is just the thickness of the shelving and only four feet high so there is no sense of stuffy, cubicle space. Each child has the feeling of being in a full-sized room, yet has a boundary marker setting out her preserves. A matching wall of Douglas fir random width panel boards with a slight V pattern ties in well with the divider. Another feature of this room is a progressive-elevation clothes closet. Clothes rods are set to accommodate each girl according to her height and the rod is raised as the girl grows. Rod rests have been pre-built into the walls at six-inch intervals so the only chore is to move the rods into a progressively higher notch.

Still another novel design to convert a single small bedroom into one for two children was conceived by Architect John Stafford for the Dr. Ralph Christensen family in Eugene, see page 22. A sturdy room divider identically built on both sides to accommodate study desk, book shelves and drawers for pencils and crayons splits the room in two even areas. This divider is about five feet tall and this permits even more privacy, especially where there are several years age spread between the two children and permits the older child to read and study long after the tiny one has drifted into sleep.

This divider was built of rugged fir and finished with several coats of rez and then waxed. Split doors from the hallway with the lower one left closed, keeps little brother from wandering, and lets the parents peek in on the children without disturbing them. Table top was built of durable material.

Still another child's room, which has many attractions and unusual ideas, has been converted from an ordinary bedroom into an all-purpose room. This one at the Ellerd Larkins home in Forest Grove, Oregon, see bottom of page 21, is featured by a solid wall of

SIMPLE ROOM DIVIDER in little girl's room sets-up definite boundry lines for occupants . . . designed by architect Clare Hamlin for the residence of Nils Hult family, Eugene, Ore.

BEDROOM viewed from the dressing room . . . note convenience of headboard which blends with balance of woodwork . . . designed by Architect Thomas Balshizer for the Norman Richards family of Cottage Grove, Oregon.

FULL WALL OF STORAGE in the Ellerd Larkins home in Forest Grove, Oregon, gives the girl of the house a wonderland of space in a small room . . . a remodeled room.

built-ins which take only thirty inches of space along one wall from a rather small room.

Finished natural, the fir built-in cabinets are most attractive. The wall contains a handy study desk built facing a window. A window seat was built to hold a mattress from a baby's crib. For dresses, coats and long clothes, a full height walk-in wardrobe was built near the middle of the storage wall and the door contains a large mirror always in view. Other than a compact area devoted to shelves for dolls high up, the balance of the wall has been given over to drawers and compartments with cabinet doors. No other furniture is needed in the room other than the bed.

Another excellent example of a working wall in a bedroom is the one Architect Lawrence Rice designed in the Cy Goldberg home in Longview, Washington, see bottom picture on page 23. This bedroom was for a boy in high school with a host of hobbies. A desk-high installation with a finely-finished desk surface occupies the full width of a large bedroom. This storage unit is a treasure trove. Of course, the real feature is the long desk top which gives plenty of elbow room for writing, room to lay out books when studying, and a place for his photographs, lamps, radio and other gimcracks.

A kneehole area makes studying easier, and six desk-type drawers along half of the unit provide handy storage for smaller supplies, linens, and boy stuff. Book shelves and storage space deep enough for typewriter and other heavy objects have been built in beneath the desk drawers.

One half of the built-in becomes the headboard for a California style bed. Reading lamps, clock and radio find handy space on the top surface. This eliminates

ROOM DIVIDER in this boy's room is tall enough to give boys of different ages desired privacy and serves as book storage and desk area . . . designed by architect John Stafford for Dr. Ralph Christensen's family of Eugene, Oregan.

virtually all furniture in the room usually used for storage.

A much simpler boy's room was designed in the Arnold Brandis home in Longview, Washington by Architect Keith Woollen, see top picture on page 23. A walk-in closet projects into the room and beside it is an alcove, and occupying the balance of this wall a desk with storage drawers has been built. This unit all ties together and has been designed in knotty cedar. A feature of the closet is duplicate sliding doors, one of which conceals a television set which is hidden unless in use and occupies only a portion of the closet floor space. The cedar has also been finished plain with several coats of varnish and gives a rustic and informal atmosphere to this boy's room.

An unusually designed bedroom-dressing room is that in the Frank M. White home in Portland by Architect James C. Gardiner, see page 18. He utilized the sloping roof line of the home in a rather attractive

HALF of closet is concealed television, and with study table makes for a good bedroom for boys . . . designed by Architect Keith Woollen for home of Arnold Brandes, Longview, Washington.

Architect Lawrence Rice designed this combination headboard wall work unit which is ideal for high school boy in the home of Cy. Goldberg, Longview, Washington.

and distinctive manner, converting what could have been a difficult and useless wall area above the normal ceiling line into a clerestory.

A complete dressing room with built-in dressing table and ample walk-in closet space occupies two walls of the dressing room, which is an alcove off the main bedroom, see page 19. A low chest of drawers, custom-made for the space, separates and acts as a divider between the bedroom and dressing areas. This room has simple and uncluttered lines and the sloping roof line gives it a spaciousness not ordinarily found in rooms with such a small floor space.

The built-ins and divider wall together with that entire wall were made of western red cedar finished in blond natural tone.

There are many ideas for custom-made devices for the bedroom which can be made to do double duty. They reduce the amount of furniture and thus the upkeep, which is pleasing to the homemaker. A narrow bench, upholstered, can be mighty handy for blanket storage. Sometimes on a two-window wall, where there is a separation between, a handy device is to build a dressing table facing one window and a writing desk beneath the other, with bookshelves occupying the rest of the wall space. The desk and table lines can be continuous to give the room smoother design.

Sometimes an L-shaped space gives just the necessary suggestion of separation between the actual sleeping and sitting area in a combination room. The development of combination or all-purpose bedrooms is even further exploited by the use of twin day beds which look exactly like sofas and have back and arm rests to reduce them to comfortable seating size for daytime use.

Another innovation in headboard design is to create sliding panels which can be moved to provide support

(See page 35)

SMOOTH lines and spacious out-of-the-way storage in the walls is included in this design by Architect Richard Sundeleaf for the Gordon Carey family of McMinnville, Oregon.

NEW CAFETERIA

RAMONA CONVENT

Alhambra, California

ARCHITECTS: BALCH - BRYAN - PERKINS - HUTCHASON

Working drawings for over $1,000,000 in additions to the Ramona Convent, 65-year-old girls preparatory school at 1700 South Marengo Avenue, Alhambra, California, are being prepared by architects Balch, Bryan, Perkins, Hutchason.

Plans include a master site plan covering the entire project, which totals almost 58,000 sq. ft. The school is the largest and oldest combined resident and day-girls Catholic school in the San Gabriel Valley and is operated by the Sisters of the Holy Names.

First units scheduled for construction comprise a complete high school building with facilities for 500 girls, and a dining hall seating 400, to be completed by September, 1956. The one-story school unit will have a library; business, homemaking and art departments; physics and chemistry laboratories; administration offices and nine classrooms.

The 400-seat dining hall, with modern kitchen, will have a stage and lounge area suitable for student assemblies and dances. A court will separate the arcaded classrooms, and will serve as an outdoor assembly area and recreational patio.

Buildings will be on concrete, stone and reinforced brick, with exterior brick facings, and exposed brick and concrete interiors. In some units wood rafters and sheathing, plus exposed laminated wood beams will be used.

Acoustical tile ceilings are specified, with acoustical tile above chalkboards in all classrooms. Plastic wainscoting is to be used in some corridors, and projected aluminum sash throughout.

Eventually, the master plan calls for additional school facilities to accommodate 300 elementary school girls, an auditorium to seat 800, a music hall with orchestra and choral practice rooms, record library and individual instruction rooms.

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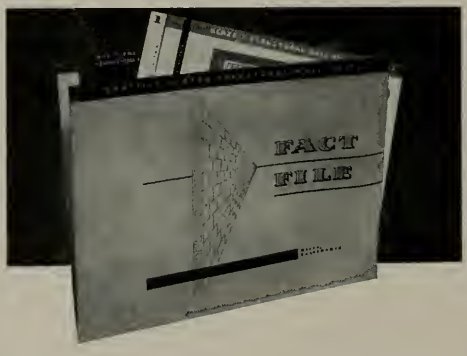

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WASHINGTON STATE CHAPTER

Reports of officers and directors, and reports of the 87th Annual A.I.A. Convention, featured the recent meeting of the Chapter in the Ben Franklin Hotel in Seattle.

New members included Herbert Jay Bittman and Eugene G. Martenson, Donn M. Sibold, and George Wrede, Associates.

The next meeting of the Chapter will be held on September 1.

PASADENA CHAPTER

"The Problems and Future Trends of Parking Structures" was the subject of the July meeting, with Channing Edington, president of State Group, and member of the board of directors of the National Parking Association; President and member of Board of California State Parking Association, and Legal Advisor in Sacramento, the principal speaker.

Edington operates 50 parking areas, handling in excess of 5,000,000 cars per year.

President Henry C. Burge presided at the meeting, gave a brief report on the recent A.I.A. convention in Minneapolis.

CALIFORNIA COUNCIL OF ARCHITECTS

The 10th Annual Convention of the California Council of Architects will be held in Santa Barbara, October 6-8, with convention headquarters at the Santa Barbara Biltmore Hotel.

Highlights of the convention will be a panel dis-

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
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Producers' Council—Northern California Chapter (See Special Page)

cussion on the architects relation to advertising and public relations, a two-day meeting of the National A.I.A. committee on public relations, the regional conference of the California-Nevada-Hawaii district, and seminars of the major committees of the Council.

General convention co-chairmen are Herman Light and Robert Field of the Southern California Chapter.

ALASKA ARCHITECTS

Examinations for licensing of architects and engineers were recently held in Anchorage, Fairbanks, Juneau, and Ketchikan.

According to the latest roster prepared by the Territorial Board of Engineers' and Architects' Examiners, there are 27 non-resident architects licensed to practice in the Territory, and 10 resident architects licensed to practice in the Territory. There are 93 non-resident engineers and land surveyors licensed to practice in the Territory.

SOUTHERN CALIFORNIA CHAPTER

A New Products Show at the General Electric Appliance Corporation's offices in Los Angeles, featured the July meeting.

W. F. McCall was in charge of the program of colored film presentation and exhibit of new products, made available through the courtesy of S. B. Maher, manager, southern California Division, General Electric Appliance Corporation.

Whiting Thompson was program chairman.

OREGON CHAPTER

William P. Hutchison, C.P.A. was the principal speaker at the recent meeting taking as his subject "The Architect and the Business World" and discussing in detail many of the business aspects of architecture.

New members include Daniel McGoodwin, Corporate; and membership changes, Nelson A. Hodges, Jr., Corporate; John M. Amundson, Jr., Henry P. Bergman, Donald S. Blair, Richard Z. Hawes, Ross L. Jensen, and John W. Reese, Associates.

The annual A.I.A. Picnic was held July 19.

NORTHWEST REGIONAL CONVENTION

The 4th Annual Northwest Regional Conference of the A.I.A. will be held September 9-11, 1955 in Glacier National Park, Montana.

NAVAL ARCHITECTURE COURSE

The United States Navy has effectively designated the Berkeley campus of the University of California as the western seaboard outpost for instruction in naval architecture throughout the summer.

Both undergraduate and graduate courses in several phases of naval architecture are being given.

The program is being given under the direction of Dr. H. A. Schade, professor of naval architecture in the division of mechanical engineering and director of engineering research.

COAST VALLEYS CHAPTER

Jerry Adams of Santa Maria, California State Polytechnic College student and winner of the Chapter's Award for being the most outstanding student in architecture at Cal. Poly for the year 1955, was a recent honored guest at a Chapter meeting.

WITH THE ENGINEERS

Structural Engineers Association of California

G. A. Sedgwick, President (San Francisco); C. M. Herd, Vice-President (Sacramento); James L. Stratta, Secy-Treas. Directors, Ben Bentoff, Ernest D. Francis, C. M. Herd, Harold Omstead, Michael V. Pregnoff, G. A. Sedwick, Joseph Sheffet, James L. Stratta, J. G. Wright, William T. Wright. Office of Secy., 140 Geary St., San Francisco 8.

Structural Engineers Association of Northern California

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C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy-Treas. Directors, C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers
Los Angeles Section

Louis J. Alexander, President; Nathan D. Whitman, Jr., Vice-President; David L. Narver, Jr., Vice-President; Jack E. McGee, Secretary; Gilbert W. Outland, Treasurer. Directors: Trent R. Dames and Sterling S. Green. Office of Sec'y, 1201 E. California St., Pasadena 6.

1955 CONVENTION COMMITTEE CHAIRMEN AND SEAC OFFICERS

Preparing for the 1955 Annual Convention of the SEAC to be held in Yosemite Valley, October 6-8, are: Al Sperry, Attendance and Registration Chairman (seated left to right); Ted Newman, General Chairman; George Arthur Sedwick, President; Byron Nishkian, Technical Program Chairman; Bill Dreusike, Social Program Chairman; standing, Charles Scurich, Publicity Chairman; John Sardis, House Chairman; Michael Pregnoff, Director; Russ Graff, Golf Chairman; James Stratta, Secretary; Bill Brewer, Banquet Chairman; and Earl Paddack, Finance Chairman.

An excellent technical program is being arranged to include speakers of national prominence, with the banquet and dance highlighting entertainment, together with a costume party and amateur night performance.

General arrangements for this year's convention are being handled by the Northern California section of the association.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Officers elected to serve during the ensuing year include CDR Paul E. Seufer, President; J. G. Wright, first vice president; COL Wm. F. Cassidy, second vice president; H. T. Anderson, Secretary; and Thomas Hurley, Treasurer.

Directors COL. L. R. Ingram, LTCOL. C. S. Lindsey, E. H. Thouren, CDR W. J. Valentine, P. Wm. Kohlhaas, BRIG GEN D. F. Johns, RADM C. A. Trexel, COL Paul D. Berrigan, and Larry L. Wise.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

The Annual SEAINC Picnic was held on July 16 at the Sonoma Golf and Country Club, with the day being devoted to baseball, golf, swimming and loafing. The Structural Engineers of Sacramento accepted the challenge for a softball game and gave a good account of themselves.

Dinner was served following the day's activities.

Recent new members include George O. Koch, Civil Engineer; Samuel W. Steinsapir, Structural Engineer; Harold C. Weathers, Civil Engineer; and James W. Moore, Engineer, Affiliate Member.

ENGINEERS IN INDONESIA

The University of California will establish a cooperative engineering education program with Gadjah Mada University in Djokjakarta, Indonesia, under the supervision of Dean L. M. K. Boelter of the College of Engineering on the Los Angeles campus. Thomas E. Hicks will have charge of the plan.

The project is designed to help the Indonesian University expand and improve its facilities for training in engineering and the sciences.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Byron Nishkian, chairman, announces the technical program to be presented at the Annual Convention, October 6-8, in Yosemite will include a number of prominent speakers from various parts of the nation, including Prof. Perry Byerly, Seismologist, University

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Sec.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Sec'y—548 S. Spring St., Los Angeles.

Structural Engineers Association of Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military
Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

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of California, and Prof. Lynn Beetle of Lehigh University who will speak on Plastic Design of Structural Steel.

Recreational activities, under direction of Bill Dreusike, includes the Annual Banquet and dance, Costume Party dance and an amateur show.

An unusual theme for the ladies entertainment is being developed by Sue Olitt.

AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS

An all-time high record in attendance was set at the Semi-Annual meeting of the ASHACE in San Francisco, June 27-29.

Programs devoted to many phases of the heating and air conditioning industry brought prominent speakers from all over the United States to discuss particular phases of today's development in the fields of research, education, and construction.

John E. Haines, president, of Minneapolis, emphasized four major divisions of consideration in the air conditioning and heating field, 1) public comfort, 2) mental health and well being, 3) physical benefit, and 4) leisure hours.

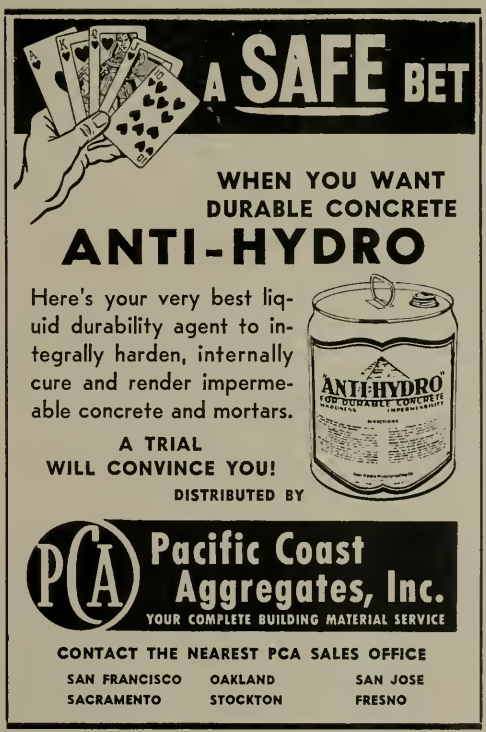
Predicting great development in the near future, E. R. Kaiser, Director of Research, declared there "would be complete air conditioning in all future construction" which in turn would increase industrial efficiency and public welfare. Kaiser predicted rapid development in the field of Solar heating, for all types of new construction.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

David L. Narver, Jr., project engineer, Holmes & Narver, Inc., engineers of Los Angeles, member of the American Standards Association subcommittee on wind pressure, sponsored by National Bureau of Standards, gave a summary of results of a meeting held recently in Washington, D.C.

U. C. DRAINAGE ENGINEER RECEIVES DEERE MEDAL

Walter Wallace Weir, drainage engineer, emeritus, in the University of California College of Agriculture, received the 1955 John Deere Gold Medal Award, which is given annually for "distinguished achievement in the application of science and art to the soil." The award is made each year by the American Society of Agricultural Engineers.



PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment
(Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, John C. Cowley
The Brookman Co., Inc.
[illegible] Third Street

Vice-President, Philip F. Brown, Jr.
Otis Elevator Company
No. 1 Beach Street

Secretary, Stanley L. Basterash
Western Asbestos Company
675 Townsend Street

Treasurer, John J. O'Connor
H. H. Robertson Company
55 New Montgomery Street

Edited by Robert W. Harrington, **Clay Brick and Tile Association,** 55 New Montgomery Street

OFFICERS elected to lead the Producers Council of Northern California during the 1955-56 year are: John C. Cowley, The Brookman Company, Inc., President (left to right); John J. O'Connor, H. H. Robertson Co., Treasurer; Stanley L. Basterash, Western Asbestos Co., Secretary; and Philip F. Brown, Jr., Otis Elevator Company, Vice-President.

OFFICERS 1955-1956

New officers of the Council were installed by past president Al West, Jr., Aluminum Company of America, at the Producer's Council Sports Day Dinner at the Peninsula Golf and Country Club, San Mateo, on Tuesday, June 28.

The installation was witnessed by a large group of Sports Day participants, with some 300 members and guests of the American Institute of Architects and Producer's Council attending the affair.

A number of prizes were distributed with Bob Dumesnil, Brookman Company, with low gross and last year's title holder Bill Vickers of the San Francisco City Architects office, presenting Dumesnil the trophy.

Rolland Gibbs and Les Thompson, architects, won the double set in tennis, and after nine innings of a terrific struggle, Bernard Sabaroff, manager of the A.I.A. baseball team, reported beating the Producer's Council team by the score of 9 to 8.

COUNCIL COMMITTEE MEMBERS 1955-1956

MEMBERSHIP: Peter C. Christensen, Truscon Steel Co., 604 Mission St., San Francisco 5.

PUBLIC RELATIONS: R. W. Harrington, Clay Brick and Tile Association, 55 New Montgomery St., San Francisco 5.

FELLOWSHIP: Philip D. Mittell, Otis Elevator Co., No. 1 Beach St., San Francisco 11.

JOINT A.I.A.-P.C.: Ira Springer, Structural Glass Co., 1492 Mission St., San Francisco.

PROGRAM: Philip F. Brown, Jr., Otis Elevator Co., No. 1 Beach St., San Francisco 11.

ADVISORY: A. L. West, Jr., Aluminum Co. of America, 615 Russ Bldg., San Francisco 4.

ENTERTAINMENT: Whit K. Alger, George L. Hall Associates, Inc., 875 Stevenson St., San Francisco.

EDUCATIONAL: William B. Polhemus, American Air Filter Co., Inc., 460 - 9th St., San Francisco.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

DORMITORY AT SANTA CLARA U

Architects Binder & Curtis, San Jose, are completing plans for construction of a new dormitory building on the University of Santa Clara campus, Santa Clara, which will provide for 150 students.

Of 3-story, with basement, reinforced concrete construction, the building will be 45x190 ft.; tile roof, steel sash, asphalt tile floors and will cost an estimated $400,000.

NEVADA BUILDS NEW RENO OFFICE BLDG.

The State Planning Board of the State of Nevada, recently announced plans for construction of a three or four story reinforced concrete office building in Reno, Nevada.

The new building, being designed by the architectural firm of Lockard & Cassozza of Reno, will cost an estimated $750,000.

ARCHITECT FIRM CHANGES NAME

Michael C. A. Henderson, manager of the San Francisco office of Benedict, Beckler & Kocher, Los Angeles architects and engineers, has moved to Los Angeles where he will become architectural associate of the firm.

Henderson will succeed Norman E. Kocker, AIA, who has joined the architectural staff of the Los Angeles City Board of Education.

The new firm name will be Benedict, Beckler & Associates.

UCLA OFFERS DESIGN COURSE

Charles H. Lewis, Los Angeles interior designer, has been appointed to the teaching staff of the University of California Extension this summer to conduct two courses in interior design.

The courses will be given Monday and Wednesday evenings. Another course Tuesday and Thursday will study advanced phases of the same subject.

SEATTLE ENGINEERS OPEN NEW YORK OFFICES

John Graham and Company, Seattle, specializing in architectural and engineering services in the commercial, industrial and institutional fields, recently opened offices in New York City at 15-44th Street.

The new offices will be in charge of Jack L. Follett of Seattle, chief architectural designer with the firm for the past eight years. George Baumgarten of New York will be assistant to Follett, and Roland Wilohen, also of Seattle, will be director of production in the new offices.

SELF-SERVICE RAMP GARAGE

The City of Berkeley will soon operate a self-service ramp type garage which is to be built at the intersection of Center, Addison, Milva and Shattuck streets in Berkeley at an estimated cost of $550,000.

The engineering firm of Headman, Ferguson & Carollo of Berkeley are designing the five story, split level, open type face building.

WILLIAM MILTON BARR HONORED BY SOCIETY

William M. Barr, retired Chemical and Metallurgical Engineer, Research and Standards Consultant of Los Angeles was honored at the 58th Annual Meeting of the American Society for Testing Materials in Atlantic City, N. J. recently, when he was presented with a certificate of Honorary Membership in the Society.

Honorary Membership is awarded to persons of widely recognized eminence in the field of work covered by the Society, or who have rendered especially meritorious service to the ASTM.

ENGINEER JOINS ARCHITECTURAL FIRM

C. E. Roark, North Hollywood, has joined the staff of Adrian Wilson & Associates, Los Angeles, architects, as petroleum, oil and lubricant installation engineer for domestic and military projects handled by the firm in the United States and foreign countries.

Roark will immediately supervise the designing and engineering of POL installations in Turkey and Greece. For the past three years he has served as general superintendent on the construction of the atomic plant at Paducah, Ky.

DONALD KIRBY ANNOUNCES CHANGE IN AIA CHAPTER

Donald B. Kirby, A.I.A. Architect of San Francisco, and California-Nevada-Hawaii regional director of The American Institute of Architects, announced recently that the Imperial County architects members of the A.I.A. will be included in the San Diego District in the future.

Previously the county was in the Southern California District which comprises San Bernardino, Riverside and a portion of Los Angeles counties.

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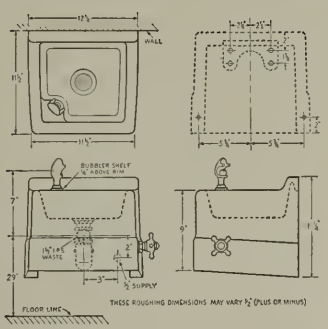

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DOUGLAS FIR PLYWOOD ASSOCIATION GOLDEN JUBILEE CONFERENCE

Western fir plywood manufacturers celebrated their 50th anniversary with a Golden Jubilee in Portland, Oregon, June 19-23, sponsored by the Douglas Fir Plywood Association of Tacoma, Washington, the industry trade association which represents Washington, Oregon and California's 97 fir plywood mills, producing three-fourths of the nation's plywood panels.

FIFTY GOLDEN IDEAS

Heart of the conference, which attracted attendance from all parts of the nation, was the display of "50 Golden Ideas" for building or remodeling with fir plywood designed by five West Coast architects. Many of the "ideas" were highly unorthodox and possibly controversial but that was part of the objective of architects Chris Choate of Los Angeles, Anshen & Allen of San Francisco, Smith & Williams of Los Angeles, A. Quincy Jones and Frederick E. Emmons of Los Angeles, and Campbell and Wong of San Francisco.

Commenting on the "50 Golden Ideas," W. E. Difford, managing director of the DFPA said, "Some of the ideas are so advanced that they may well be quite controversial. Others should challenge the design talents of professionals in the field, and some are simply refinements of traditional plywood applications and employ construction principles that could influence residential design and construction practice for years to come."

A permanent memorial containing the first panel of fir plywood manufactured fifty years ago for exhibition in the Lewis & Clark Exposition, was unveiled in the Forestry Building in Portland to open the Golden Jubilee. Mayor Fred L. Peterson of Portland, officiated at the unveiling with the curtains on the display being pulled aside by Christine Ann Autzen, great granddaughter of Peter Autzen, co-owner of the Portland Manufacturing Company where the first panel was made more than fifty years ago. The Forestry Building is the sole remaining structure of the 1905 World's Fair and houses a number of permanent exhibits of the lumber industry and pioneer objects.

Something different was offered with presentation of a theatrical review tuned to a fir plywood theme . . . what it is, what it does, and what it expects to do.

The show was entertainment, patterned on the format of a Broadway musical. A veteran cast of fifty entertainers, all hand-picked by Horace Robinson, director of dramatic productions at the University of Oregon, and famous west coast show producer, danced, sang and wisecracked throughout the review.

Ben H. Hazen of Portland, past president of the United States Savings & Loan League, and president of the Benj. Franklin Federal Savings and Loan Association of Portland, told convention delegates "there is a pretty well assured demand for 7,000,000 more homes by 1960," and that the "financing of the construction will require a $45,000,000,000 increase in home debt."

The Jubilee provided the theme for the Arlene Francis "Home" television show on Tuesday, with many Portland homes and residents taking part in the program.

One of the principal events was the Annual Dinner and Dance held in the grand ballroom of the Masonic Temple at which Lt. Gen. Leslie R. Groves, U.S.A. (Ret.), former head of the wartime Manhattan Project, was the principal speaker.

PHOTOGRAPHS ON OPPOSITE PAGE ARE: (1) Lieut. General Leslie R. Groves, U.S. Army (Ret.), a vice president of Remington-Rand Company, Inc., and principal speaker at the grand wind-up banquet of the 1955 Golden Jubilee annual meeting of western fir plywood manufacturers; (2) Ron Myron, Portland radio and television personality, addresses a women's luncheon, in background are performers from plywood association's big musical-pageant production "The Plywood Age" which ran on evenings during conference. Seated at head table are Mrs. Horace Robinson, Mrs. James Fowler, and Mrs. Harrison Clark; (3) Newly elected officers of the Douglas Fir Plywood Association. Center, seated, Howard B. Garrison, vice-president and general manager, Evans Products Company, Western Division, Coos Bay, Oregon, new president. Standing (l. to r.) Robert N. Kelly, general sales manager, M. and M. Wood Working Company, Portland, Trustee; C. Henry Bacon, Jr., vice president and general manager, Simpson Logging Company, Shelton, Washington, Treasurer; Martin N. Deggeller, president, Harbor Plywood Corpn., Aberdeen, Washington, Trustee; A. W. Agnew, vice president, Pacific Coast Company, Sonoma, California, Vice-President; and Fay L. Foval, assistant general sales manager, The Long-Bell Lumber Company, Longview, Washington, Trustee. Other officers included Monford Orloff, general manager, Mt. Baker Plywood, Inc., Bellingham, Washington, Secretary. (4) Howard B. Garrison, vice president and general manager, Evans Products Company, Western Division, Coos Bay, Oregon, elected president of the DFPA; (5) S. Eberly Thompson, executive vice president, M and M Wood Working Company, Portland, Oregon, gives farewell address as outgoing president of the DFPA; (6) Ben Hazen, president, Benjamin Franklin Savings & Loan Association, Portland, former president, United States Savings and Loan League, speaking at men's luncheon; (7) Dedication of the fir plywood memorial in Portland's Forestry Building. L. to r.: Thomas J. Autzen, son of founder of Portland Manufacturing Company and himself a worker in the plant when the first plywood was made; Oscar Mason, superintendent at the plant from 1907-1928 when he became the first inspector of plywood; W. E. Difford, managing director, Douglas Fir Plywood Association; and William C. Bailey, prominent in Pacific Northwest fir plywood mills and formerly vice president and general manager of U.S. Plywod Corpn. in Seattle; and (8) E. W. Daniels, former president, Harbor Plywood Corporation and for 19 years chairman of the management committee of DFPA, gives the opening address at the Golden Jubilee meetings.

(From page 12)

MASTER BEDROOM

. . . note headboard.

come direct-indirect lighting fixtures.

The supply duct system of the year-around air conditioner was introduced into the Preliminary Studies at the very beginning and is situated over the wardrobes and storage facilities at interior bearing walls, and connects to high wall registers. Return floor grilles are located near the exterior glass walls and connect to underground concrete ducts leading back to the air conditioning unit. This layout, with conditioned air entering high at the interior and being exhausted low near the glass, was designed principally for summer cooling (the most critical condition), but it seems to be very effective for winter heating as well.

Exterior walls are of Redwood siding both sides, and terminals of the building are accented by stabilizing masses of exposed concrete masonry. Interior walls dividing rooms are of imported Oriental Ash plywood both sides. Hence each wall has an integral character as such and the Redwood and Ash complement each other very well in terms of grain, color and light value. Cabinetwork and built-in features are of Ash to complete the theme.

Floors are carpeted in the Living Room and Bedrooms, vinyl tile in the Kitchen and Bathrooms, cork tile in the Entry, Passageways, Lanai and Den.

Upper ceilings are finished with a luminous fibreboard to preserve and diffuse light. Redwood battens cover the joints of this material and also express in exact terms the modular framing of the roof. The lower soffits have a cement asbestos board finish inside and out and emphasize the indoor-outdoor theme.

Structurally, the chief problem was designing the lower roof soffits on the cantilever principle with no rigid joints at exterior bearing walls or posts. After some study it was found that these horizontal planes (defined by dotted lines in the Floor Plan) could be made virtually rigid elements in themselves by the use of continuous wood headers around the perimeter and a small steel channel placed transversely near the end of each wing as reinforcement. Vertical supports could then be placed in practically any position, eccentric or otherwise, and more freedom in planning could be gained. In general, the soffits extend four to six feet outside but only two feet inside, and no deflection has yet developed.

Ventilation of roof joists is accomplished by means of small prefabricated aluminum louvre panels about 1½" in diameter, placed in a modular manner and forming decorative elements in themselves.

The electrical system is low voltage, with noiseless touch-plate switches and a remote relay panel in the Master Bedroom controlling all circuits. In general, throughout the house, artificial light comes from the same direction as natural light, making the same furniture arrangement useful during all hours of the day.

FROM DESERT TO GLAMOR

(From page 17)

in a fashion conducive to beauty and comfort of walking and standing.

Paneling illustrated in the lower picture on page 17, is of quality oak and walnut. Materials have been blended harmoniously with careful attention to both aesthetic and functional values.

Comfort and convenience for both public and personnel are keynotes of the building interior. Facilities provided include a large conference room, private

executive offices, staff lounges, a kitchenette, special workrooms and two vaults. Business machine work areas are acoustically engineered to damp noise. FM radio furnishes soft music as desired. The custom designed banking facilities, consisting of built-in units, contain predetermined required file and storage space. The location of the switchboard provides the operator with a panoramic view of the entire floor area so that incoming calls can be relayed promptly to officials and other personnel.

WESTERN BEDROOMS

(From page 24)

for pillows wherever needed.

Western architects are giving more consideration to location of the bedroom so that some of the outdoors can be brought into this room. With the move towards outdoor living increasing, it is only natural that this trend should be capitalized on when bedrooms are designed. Wide picture windows opening onto the gardens work wonders in setting the theme for the bedroom. If the garden is secluded, French doors can connect bedroom and garden to create the perfect blending, so the early riser may go outside without disturbing the rest of the household.

Lighting of the bedroom is getting additional attention where two levels of light are required. An indirect light is pleasing for most of the room, and more intensive natural light should be used around mirrors and dressing areas. Reading, of course, requires the stronger light which individual bed lamps or floor lamps can supply. Indirect fluorescent lights in recess on all four walls up near the ceiling give a particularly pleasant appearance and effect.

Probably no two architects nor owners would agree on just what is the perfect bedroom, but it is refreshing to see some originality going into the design of this portion of contemporary homes. The results are well worth the effort and one more part of the home is being built to live in.

MILLWORK SPECIFICATIONS

(From page 5)

Consider, then, what the Manual affords. Herein is a simple but sufficient description of the species of woods you can safely specify, with an explanation of recommended grades, the finished sizes that you will receive, and an explanation of moisture content and its proper use.

Then, in the Manual, all the categories of millwork are defined, production standards are set forth, and the special conditions that govern the manufacture of each category. Be brought to face with one sure thing —the architect can no longer function as the "Master Builder" that he used to be. The Architectural Millwork field alone is so complex that the active participating members themselves find it difficult to keep abreast of new developments, and this is but one field of the building industry. So we need the Manual. We need the Manual not only as an instrument to keep you informed, but as a medium of interchange of information among ourselves. As new products of wood are developed, as old designs change, as new processes are perfected, these are reflected in revisions in the Manual.

Only by being sure, as a specification writer, that you contain this progress in your specs, can you be certain of securing the best millwork for your client.

Only by being sure that the industry as a whole adopts and uses these developments, as conscientious millmen, can we be certain that the quality of architectural mill work will constantly increase. Be it repeated, then, that we both need the Manual as a common reference between us.

Then, the Woodwork Institute of California does more than publish and distribute the Manual, that

PICTURE CREDITS: Allendale Studio—Cover, pages 9, 10, 11, 12, 13 and 32; Balch, Bryan, Perkins, Hutchason, architects, page 5; Dept. of Public Works, State of California, page 7; Owen and Tagney, pages 10, 11, 12, 13; Julius Shulman and courtesy Kawneer Company—pages 14, 15, 16, 17; B. J. Allen Photos, page 18; Photo Art Commercial Studios, pages 19, top of 21, 23, 32; West Coast Lumbermen's Association, pages 20, bottom of 21, 22 and 24; Leif L. Nielsen, Architect, page 25.

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you may write good millwork specifications. There is the services of the Technical Consultant, ever available for counseling and assistance. There is a large and ever growing reference library, for your use in special problems. There are over one hundred members of the WIC, located all over the State, who are eager to help with special problems. The names and addresses of these members are shown in the directory section of the Manual. All of this, and any else that the W.I.C. can do, belongs to the specification writer—he need only ask or use the services.

In summation, then, "What Makes Good Millwork Specifications"? Let the conditions be listed.

First: a clear and concise naming and description of the species of wood desired for each category.

Secondly: a definite reference to the authoritative Manual of Millwork, such as "All the work in this Section shall be completed in accordance with the Standards as set forth in the Manual of Millwork, as published by the Woodwork Institute of California."

Thirdly: a setting forth of the special requirements under each section. In Casework, for example, the Grade, as "Standard," "Custom," or "Premium" must be specified. The type of doors, whether the doors and drawers are to be lipped or flush, and any deviations from the grade specified must be set forth.

Then, that is all! Simple? Certainly! When the Manual of Millwork is properly used, the work of the specification writer has been reduced to the proper fundamentals, and he has further been assured that nothing has been foregone. Then there will be no description of how to miter casing around openings, or naming of metal medicine cabinets, or accidental listing of the grades for the structural lumber. And this reduction to simplicity will surely be reflected within the details, and as specifiers you will know exactly what you will receive, and we as manufacturers and suppliers will know exactly what you want, and we will have arrived at what makes good millwork specifications.

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AMERICAN SOCIETY OF CIVIL ENGINEERS SAN FRANCISCO SECTION

Philip J. Caffey spoke before the Sanitary Division recently on the subject of "The Sanitary and Water Quality Aspects of the Proposed Bay Barriers," discussing many phases of the problems which would arise by bay dams.

KRAFTILE COMPANY OBSERVES ANNUAL "DEALERS DAY"

Kraftile Company held its Sixth Annual Dealers Day luncheon and inspection tour of manufacturing plant facilities at Niles, California recently.

C. W. Kraft, president of Kraftile Company, presided at the meeting which was attended by more than 50 building material and masonry dealers and nurseries in northern California handling Kraftile aPtio Tile.

Featured at the plant inspection was a demonstration of the "Dry-Mix" method of laying patio tile.

California Traffic Problem

EFFECT OF DOLWIG ACT

(From page 8)

that the street plan and general location very definitely favor a terminus more southerly than Army Street. Candlestick Point is about five miles south of the Bay Bridge but it is more than twelve miles north of the San Mateo Bridge.

"Because the Bay Bridge and the Southern Crossing are included in the same financial 'package' and because the Bay Bridge will undoubtedly carry the bulk of all transbay traffic, wide errors in estimating Southern Crossing traffic will have a relatively small effect on the estimates of combined earning capacity. Therefore, the total bonding capacity will be influenced only to a minor extent by the actual amount of traffic induced or generated by the Southern Crossing, and even to a lesser extent by diversion from the Bay Bridge."

Fundamentally, the transit problem is one of moving people rather than automobiles. As is the case for the use of Hetch-Hetchy power, valuable rights may be lost when those rights are not exercised.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

NATIONAL PLUMBING CODE—Minimum Requirements for Plumbing. The American Society of Mechanical Engineers, 29 W 39th St., New York 18. Price $3.50.

A uniform code for plumbing has been approved after 20 years of development. It is designed to modernize existing practices and to coordinate the work of plumbing equipment manufacturers, architects, contractors, municipal law makers, building officials and others.

The Code may be used by architects and contractors in the design and installation of plumbing equipment, by plumbing equipment manufacturers in the design of their product, and by states and cities as a basis for regulation and ordinances.

HEATING, VENTILATING, AIR CONDITIONING GUIDE 1955. 33rd Edition. American Society of Heating and Air Conditioning Engineers, 62 Worth St., New York 13. Price $12.00.

Contains the latest technical and equipment information (technical section 1160 pages, equipment section 328 pages). Many revisions and expansions, the result of research; changes in codes and standards; new methods in product design; and improved engineering practices; 53 chapters are grouped: I—Fundamentals; II—Human Reactions, III—Heating and Cooling Loads, IV—Combustion and Consumption of Fuels, V—Systems and Equipment, VI—Special Systems, and VII—Instruments and Codes. Edge indexes.

ELECTRONS, ATOMS, METALS and ALLOYS. By William Hume-Rothery, O.B.E., F.R.S. Philosophical Library, Inc., 15 E. 40th Street, New York 16. Price $10.00.

The application of electron theory to the structure and properties of metals and alloys has aroused much interest in recent years, but presents great difficulty to the non-mathematical reader. This book is divided into four parts dealing with the structure of atoms, metals, alloys and atomic nuclei, and is presented in the form of a dialogue between an Older Metallurgist and a Young Scientist, bringing out clearly the contrast between the old and the new viewpoints. The book should prove valuable to many as an elementary introduction to modern atomic theory.

NEW HORIZONS IN COLOR. By Faber Birren. Reinhold Publishing Corp'n, 430 Park Ave., New York 22. Price $10.00.

The author has just returned from his U. S. State Department sponsored tour of Europe where he discussed color in the decoration of factories, offices, schools and hospitals.

This book examines the psychological as well as the functional and esthetic effects of color in architecture and decoration.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Lighting efficiency increase. New ways to increase lighting efficiency, economy and design flexibility are suggested in a fully illustrated brochure; contains numerous photographs of installations in school, office, home, factory, restaurant and library. Advantages of safety, installation, maintenance and lower costs are also discussed. Write DEPT-A&E, Bakelite Co., 300 Madison Ave., New York 17, N. Y.

Vertical Furring. Technical bulletin by Metal Lath Mfgrs Ass'n (No. 14) discusses uses of both braced and free-standing furring, together with complete specifications on methods of installation; recommendations cover the maximum allowable heights for furring construction either with channel studs or with prefabricated metal studs; typical details of construction illustrated and diagrammed. Copy available free write DEPT-A&E, Metal Lath Mfgrs Ass'n, Engineers Bldg, Cleveland, Ohio.

Cabinet Construction Data. No. 6 of series by Architectural Woodwork Institute gives Cabinet Construction Data (A.I.A

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SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

File No. 19-E); many examples shown, diagrams, photographs, drawings, applicable to all types of residential, commercial and industrial construction. Free copy write DEPT-A&E, Architectural Woodwork Institute, 332 S. Michigan Ave., Chicago, Ill.

Doors. 16-Page catalog detailing virtually unlimited uses as space-savers and room dividers in residential, commercial and institutional construction and remodeling; presents a complete visual and detailed description of the entire line of Modernfold, vinyl-covered folding door. Section devoted to details of custom doors. Free copy write DEPT-A&E, Modernfold Doors, Inc., 3836 E. Foothill Blvd., Pasadena 8, Calif.

Lubricated Plug Valves. New 28-page catalog shows straight-way, 3-way, 4-way, and multiple port lubricated plug valves for 250 pounds oil, water, gas and 150 pounds steam working pressure; offers wide choice of metals and sizes in 100% pipe area and venturi types. Copy available free, write DEPT-A&E, Homestead Valve Mfg Co, Coraopolis, Pa.

Standard Specifications for Concrete Reinforcing Bars. Handy cardboard chart compiled by the Concrete Reinforcing Steel Institute, gives details on standard A305 reinforcing bars; and data on grades of steel and deformed bars. For copy write DEPT-A&E, Steelform Contracting Company, 666 Harrison St., San Francisco, Calif.

Installation of Piping Systems. New booklet gives yardstick for measuring basic cost factors in installing piping systems; many illustrations; compares wrought iron and other types of pipe in terms of the three important costs—initial purchase cost, cost of installation, and cost of maintenance; includes several case histories and digest of important uses for wrought iron pipe in industrial and municipal services. Copy free, write DEPT-A&E, A. M. Byers Co, Pittsburgh, Pa.

Helpful Electrical Building Code Data. New 20-page catalog gives a picture story of electrical conduit production and helpful electrical building code data; illustrates various rust-proofing and welding processes used in manufacture of electro-galvanized, hot-dipped galvanized and enamel conduit; data on tests, types of steel, weight, dimensions. Free copy by writing DEPT-A&E, The Steelduct Co, Youngstown, Ohio.

Sewer Pipe. New 8-page illustrated brochure contains latest information on asbestos-cement pipe for connecting house drains with street sewers or septic tanks; describes and illustrates feature recently introduced to speed assembly of pipe to speed and simplify installation. For free copy write DEPT-A&E, Johns-Mansville, 22 E. 40th St, New York 16, N. Y.

Data on Anodic Surfaces. New descriptive data brochure on process for producing hard Anodic surfaces on all alloys of aluminum; explains uses, metal conditions, and technical information. Write DEPT-A&E for free copy, Sanford Process Co, Inc, 6920 S. Central Ave, Los Angeles 1, Calif.

Home Wiring Handbook. New edition, revised to bring about improved approach to determining electric circuit requirements and also to conform to newly revised Residential Wiring Handbook of the Industry Committee on interior Wiring Design as well as 1953 National Electrical Code, three degrees of electrical living explained in book are 1) Lesser degree, requiring 25 kilowatt capacity, 2) Average Degree, requiring 35 kilowatt capacity, and 3) Greater Degree, requiring 40 kilowatt capacity. Westinghouse Electric Appliance Division, Mansfield, Ohio. Cost $1.00.

Reference Guide on Electronic controls of Heating. New booklet is guide on electrical heating, ventilating and air conditioning, designed to give architects, engineers and specification writers up-to-date reference on available electronic equipment and components, typical system specifications and connection Diagrams; described are standard day and night space thermostats, insertion units for temperature measurement in ducts or liquid lines, outdoor sending elements which work with indoor thermostats; 17-typical system diagrams are shown. For free copy write DEPT-A&E, Minneapolis-Honeywell Regulator Co, Minneapolis 8, Minn.

Roof Insulation. 4-Page brochure on Fesco Board Roof Insulation; gives details of composition of the board, its physical characteristics, and performance data such as K factor, weight, moisture resistance, and non-combustability; outlines application specifications. For free copy write DEPT-A&E, The F. E. Schundler Co, 504 Railroad Street, Joliet, Ill.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quotad are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb	5.05
Asphalt roofing, 15-lbs	2.70
Asphalt roofing, 30-lbs	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl.	3.40

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White: 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.62

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd	$7.75
⅜-inch to ⅛-inch, per cu. yd	7.75
No. 6 to 0-inch, per cu. yd	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosel concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per dey.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvenized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite. 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $1.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
⅛ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
⅝ x 2¼	390.00	381.00
⅝ x 2¾	375.00	355.00
⅝ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

⅝ x 2¼ First Grade	$390 00
⅝ x 2¼ 2nd Grade	365.00
⅝ x 2¼ 2nd & Btr. Grade	375.00
⅝ x 2¼ 3rd Grade	240.00
⅝ x 3¼ 3rd & Btr. Jtd. EM	380.00
⅝ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00

Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.

Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.

Tileboard—4'x6' panel ..... $9.00 per panel

Wallboard—½" thickness ..... $55.00 per M sq. ft.

Finished Plank ..... 69.00 per M sq. ft.

Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m..... $100.00

Rough, No. 2 common O.P. or D.F., per M. f.b.m..... 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225 00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
⅜-inch, 4.0x8.0-S1S 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.

Average cost to lay shingles, $6.00 per square.

Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square..... $15.25

¾" to 1¼" x 24/26 in split resawn, per square 17.00

Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds..... $45.50

Standard Ribbed, ditto..... $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whitewashing	per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¼c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$ .....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply..... $15.00 per sq. for 30 sqs. or over.

Less than 30 sqs. $16.00 per sq.

Tile $40.00 to $50.00 per square.

No. 1 Redwood Shingles in place. 4½ in. exposure, per square..... $18.25

5/2 No. 1 Cedar Shingles, 5 in. exposure, per square..... 14.50

5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25

4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square..... 23.00

Re-coat with Gravel $5.50 per sq.

Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00

¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00

1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00

Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top..... $99.50

Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41

Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M..... $240.00
Standard, 8-in. per M..... 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft..... $1.50
Vented hip skylights, per sq. ft..... 2.50

Aluminum, puttyless,
(unglazed), per sq. ft..... 1.25
(installed and glazed), per sq. ft... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜"..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2711
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

HOSPITAL, Petaluma, Sonoma county. Petaluma District Hospital, Petaluma, owner. 1-Story, 50-bed hospital with all facilities — $581,544. ARCHITECT: Stone, Mulloy, Marraccini and Patterson, San Francisco. GENERAL CONTRACTOR: Joseph Bettancourt, San Bruno.

ELEMENTARY SCHOOL, Mesquite, Nevada. Clark County Educational District No. 1, Overton, Nevada, owner. 6-Classrooms, library-classroom, kindergarten, principal's office, auditorium and cafeteria building, concrete masonry, structural steel, metal sash, hollow metal doors, glass and glazing, floor covering, ceramic tile, metal toilet stalls, chalk boards, composition roofing, insulation, electrical, cooling and heating, ventilating and plumbing—$174,885. ARCHITECT: Miller-Wilson-Smith & Turner, Las Vegas, Nevada. GENERAL CONTRACTOR: Ralph Child, Springville, Utah.

MEMORIAL AUDITORIUM, Porterville, Tulare county. Porterville Memorial District, Porterville, owner. 2-Story reinforced brick auditorium seating 1825 persons; composition and gravel roofing, structural steel, miscellaneous iron, concrete, asphalt tile and wood floors, hardwood plywood paneling, aluminum sash, pressed steel door frames and metal covered doors, air conditioning, metal toilet partitions, electrical work, fire sprinkler system, granite veneer, insulation, steel stairs—$534,400. ARCHITECT: Robert N. Eddy, Bakersfield, and C. M. Deasy, Los Angeles. GENERAL CONTRACTOR: Maino Constn. Co., Porterville.

MOTORIZED TRAVELING SCAFFOLDS on suspension, Golden Gate Bridge, San Francisco. Golden Gate Bridge & Highway District, San Francisco, owner. Contract for installation of new equipment on Golden Gate Bridge—$644,769. GENERAL CONTRACTOR: Judson-Pacific-Murphy Inc, Emeryville.

FURNITURE STORE, Fresno. Berg Furniture Co, Fresno, owner. New building to furnish facilities for furniture store—$132,306. ARCHITECT: Howard Schroeder, Fresno. GENERAL CONTRACTOR: Larsen-Ratto Const. Co, Fresno.

VETERAN'S MEMORIAL, Porterville, Tulare county. Porterville Memorial District, Porterville, owner. Two story reinforced brick, structural steel, reinforced concrete, aluminum sash, pressed steel door frames, metal covered doors, metal toilet

partitions, concrete and asphalt tile floors, ceramic tile and wood floors, electrical, mechanical work — $534,400. ARCHITECT: Robert N. Eddy, Bakersfield and C. M. Deasy, Los Angeles. GENERAL CONTRACTOR: Maino Constn Co, Porterville.

MERCY HIGH SCHOOL — Addition, Burlingame, San Mateo county. Sisters of Mercy c/o Architect, owner. Two story reinforced concrete and frame and stucco construction, tile and composition roofing; facilities for 10 classrooms, and cafeteria building—$262,900. ARCHITECT: Martin Rist, San Francisco. GENERAL CONTRACTOR: Carrico Constn Co, San Francisco.

CHURCH, Merced. Presbyterian Church of Merced, owner. Frame and stucco construction—$119,199. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Graham & Jensen, Merced.

ST. PATRICK'S SCHOOL, San Jose, Santa Clara county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. Interior remodel of present school building and facilities—$20,724. ARCHITECT: Wilton Smith, San Francisco. GENERAL CONTRACTOR: Elmo Pardini, San Jose.

RADIOGRAPHY BLDG, Columbia Steel Plant, Pittsburg, Contra Costa county. Corps of Engineers, U.S. Army, San Francisco, owner. Reinforced concrete building 48x95 ft. in area; lean-to 26x44 ft.; concrete pile foundation; 20-ton bridge crane, new railroad track spur, utilities—$225,360. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

ELEMENTARY SCHOOL—Dewy, Sac-

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3 4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	43.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.63	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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ARCHITECTURAL SLIDING STEEL SASH, One lot only — new, half price. 13 units, assorted sizes, 353 square feet total. 3 at 7 ft. x 5 ft.; 4 at 7 ft. x 4½ ft.; 1 at 6 ft. x 4½ ft.; 2 at 6 ft. x 4 ft.; 1 at 7 ft. x 3½ ft.; 1 at 4½ ft. x 3 ft.; 1 at 3 ft. x 3 ft. Phone DElaware 3-7378, San Francisco.

BUILDERS! You can make more money; get information you need before it is published elsewhere; Subscribe to the daily ARCHITECTS REPORTS, only $10.00 per month. Complete information from ARCHITECTS REPORTS, 68 Post Street, San Francisco. Phone DOuglas 2-8311.

MAYNARD DIXON MURALS—signed and dated 1935. Two, oil on canvas, about 7 feet 10 inches x 15 feet 5 inches and 7 feet 11 inches x 17 feet 10 inches. Mountains and mounted figures. Edward C. Washer, 628 Montgomery St., San Francisco 11, GArfield 1-8427.

COLLECTIONS—Thoroughly experienced in all phases of the collection business; your interests protected at all times; bonded agents everywhere; no collection charge; California Material Dealers Service Co., 925 Hearst Bldg., San Francisco. Ernest T. Langley, Manager.

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SAND BLASTING EQUIPMENT and sand: Painters scaffolding, compressors rented, etc. Call JACK SMITH for prices. Smith Industrial Supply Co., 395 Irwin St., San Francisco. Phone UNderhill 1-2861.

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ARCHITECT: Salary range $600-$700. To 45 years. California registration and 2 years architectural experience required. Splendid opportunity for highly imaginative architect able to work cooperatively and effectively with other architects doing preliminary planning, design and construction of municipal projects under contract. For Examination details call at Civil Service Dept., City Hall, Oakland, Phone TE 2-3600.

ramento, Sacramento county. Arden-Carmichael Union Elementary School District, Carmichael, owner. Frame and stucco construction; six-classrooms, kindergarten, multi-purpose, administration, and toilet rooms — $221,023. ARCHITECT: Chas. F. Dean, Sacramento. GENERAL CONTRACTOR: United Constn Co, Sacramento.

TURBO-JET ENGINE—Testing Facility, Naval Air Station, Alameda. U. S. Navy, District Public Works Office, San Bruno, owner. 1-Story building, exterior services, earthwork, paving, concrete work, pre-cast light concrete roofing, structural steel, asphalt tile floors, plumbing, heating, ventilating, electrical work—$599,859. GENERAL CONTRACTOR: Shaw & Estes, Dallas, Texas.

CHURCH & SUNDAY SCHOOL, Madera. 1st Methodist Church of Madera, owner. Concrete block and frame construction, laminated arches, asbestos shingles, air conditioning, steel sash—$229,215. ARCHITECT: Charles D. James, Madera. GENERAL CONTRACTOR: Harris Const. Co, Fresno.

COUNTY COURT HOUSE, Visalia, Tulare county. County of Tulare, Visalia, owner. Four story, structural steel frame, reinforced brick, porcelain enamel panels, air conditioning — $2,763,500. ARCHITECT: Horn & Mortland, Fresno and R. P. Clark, Visalia. GENERAL CONTRACTOR: E. H. Moore & Son, San Francisco.

ELEMENTARY SCHOOL, Chico, Butte county. Pleasant Valley Elementary School District, Chico, owner. Frame and stucco construction; 8-classrooms, administration room, toilet rooms — $127,896. ARCHITECT: Lawrence G. Thomson, Chico. GENERAL CONTRACTOR: Crocker & Tandy, Richmond.

ELEMENTARY SCHOOL—Carmel River, Carmel, Monterey county. Carmel Unified School District, Carmel, owner. Frame and stucco construction; 5-Classrooms, and toilet rooms—$60,831. ARCHITECT: Elston & Cranston, Carmel. GENERAL CONTRACTOR: Ekelin & Small, Salinas.

SUPER-MARKET, San Francisco. Frank Petrini, San Francisco, owner. 1-Story reinforced concrete and frame construction —$500,000. ARCHITECT: Sewall Smith, Oakland. STRUCTURAL ENGINEER: R. H. Cooley, Oakland. GENERAL CONTRACTOR: John J. Moore Co, Oakland.

ST. THERESA CHURCH, Fresno. Roman Catholic Diocese, Monterey-Fresno, owner. Reinforced concrete and structural steel roof trusses with tile roof; seating capacity 800 — $355,000. ARCHITECT: Vincent Buckley and Fred Houweling, San Francisco. GENERAL CONTRACTOR: Long & Needham, Fresno.

MOTEL, Oakland, Alameda county. Clyde Gibbs Co, Oakland, owner. 17-Unit, 2-story, frame and stucco construction; concrete block, brick veneer. ARCHITECT: George J. Steuer, Oakland. GENERAL CONTRACTOR: Ray Collins, Oakland.

ELEMENTARY SCHOOL ADDN., Geyserville, Sonoma county. Geyserville Elementary District, Geyserville, owner. Frame and stucco construction; 2-classrooms, toilet rooms — $39,980. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: Ben Oretsky, Cotati.

FRATERNITY, Addition and remodel, Berkeley, Alameda county. Acacia Fraternity, Berkeley, owner. Interior and exterior remodel of present building and construct addition — $78,000. ARCHITECT: A. Lewis Koue, Oakland. GENERAL CONTRACTOR: F. P. Lathrop, Berkeley.

WAREHOUSE, McClellan Air Force Base, Sacramento county. Corps of Engineers, U. S. Army, Sacramento, owner. Two special A.M.C. warehouses, 400x800 ft and 400x2000 ft.; concrete block and masonry construction; sewage pumping plant, roads, drainage, paving, electrical system, all utilities—$6,473,176. GENERAL CONTRACTOR: Heller Constn Co, Erickson Constn Co, Lawrence Constn Co (Joint Venture), Sacramento.

ELKS CLUB, Santa Monica, Los Angeles county. Elks Club, B.P.O.E. No. 906, Santa Monica, owner. Alterations and construction of a second floor; Type V construction, rubber tile and ceramic tile floors, plaster, acoustical tile, heating and ventilating, steel sash, elevator, built-in booths, bar, plumbing, electrical and soundproofing. ARCHITECT: Joe Estep, Santa Monica. GENERAL CONTRACTOR: Herbert Goldsworthy, Santa Monica.

TELEPHONE EXCHANGE, Colton, San Bernardino county. Pacific Telephone & Telegraph Company, Los Angeles, owner. New exchange facilities building will contain 8600 sq. ft. floor space. ARCHITECTS: Allison & Rible, Los Angeles. GENERAL CONTRACTOR: Robinson & Wilson, San Bernardino.

WAREHOUSE: San Leandro, Alameda county. General Foods Corpn, San Leandro, owner. 1-Story reinforced concrete construction with structural steel roof trusses and wood roof; 248x460 ft. in area —$700,000. STRUCTURAL ENGINEER: H. J. Brunnier, San Francisco. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

HIGH SCHOOL ADDN, Hollister, San Benito county. San Benito County High and Junior College District, Hollister, owner. Boys and girls shower and locker rooms addition to Hollister High school; frame and stucco construction—$104,937. ARCHITECT: Vincent G. Raney, San Francisco. GENERAL CONTRACTOR: Ekelin & Small, Salinas.

COUNTY JAIL, Salinas, Monterey county. County of Monterey, Salinas, owner. Reinforced concrete addition including new cell block and new elevators—$94,124. ARCHITECT: Butner, Holm & Waterman, Salinas. GENERAL CONTRACTOR: F. V. Hampshire, Salinas.

P-X & HOBBY SHOP, Signal Depot, Sacramento county. Corps of Engineers, U. S. Army, Sacramento, owner. Post Exchange building 48x129 ft. and Hobby Shop 25x41 ft; concrete block and masonry construction — $116,168. GENERAL CONTRACTOR: Affiliated Engineers & Contractors, Sacramento.

VOCATIONAL SHOP AND CLASSROOMS, Hanna Center for Boys, Sonoma county. Hanna Center for Boys, Aqua Caliente, owner. Frame and stucco classroom buildings and concrete block and frame shop building—$71,616. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: Midstate Constn Co, San Francisco.

ELEMENTARY SCHOOL, Eureka, Humboldt county. Eureka Elementary School District, Eureka, owner. New Worthington Elementary School, 8-classrooms, kindergarten, multi-purpose room, kitchen, administration offices, toilet rooms; frame and concrete block construction — $240,000. ARCHITECT: Gerald Matson, Eureka. GENERAL CONTRACTOR: A. C. Johnson & Son, Eureka.

HOLIDAY HOTEL, Reno, Nevada. Holiday Hotels, Inc., Reno, Nevada, owner.

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Eight story, with basement, reinforced concrete construction, steel windows and steel sash, three elevators, air conditioning; 200 rooms with baths; dining room, cocktail lounge — $1,783,760. ARCHITECT: Frank W. Green, Reno, Nevada. GENERAL CONTRACTOR: F. S. Macomber & Brunzell, Culver City, California.

CITY HALL & POLICE STATION, Visalia, Tulare county. City of Visalia, Visalia, owner. One story reinforced brick construction; 12,200 sq. ft. floor area—$209,000. ARCHITECT: James P. Lockett, Visalia .GENERAL CONTRACTOR: Chester & Alexander, Visalia.

ELEMENTARY SCHOOL — Wishom, Fresno. Fresno Unified School District, Fresno, owner. Two kindergartens, 12-classrooms, administration room, multi-purpose room, kitchen, toilet rooms—$379,898. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Harris Construction Co., Fresno.

IN THE NEWS

WALNUT CRACKING PLANT PLANNED

The California Walnut Growers Association, Los Angeles, has been granted a building permit by the City of Stockton for construction of a 700x700x56 ft. high, reinforced concrete walnut cracking plant in the City.

Plans for the new plant are being prepared by Benson Eschenbach, architect, Richmond. Estimated cost of the project is $4,000,000.

COURTHOUSE AND JAIL BONDS

Voters of Humboldt county (Calif) recently approved issuance and sale of $3,000,000 in bonds, with proceeds to be used in the construction of a new county courthouse and jail in the city of Eureka.

ENGINEERING FIRM ANNOUNCED

William H. Ellison and George A. Sedgwick have announced the formation of a partnership to be known as Ellison, Sedgwick and Associates, Consulting Structural Engineers.

Offices of the new organization will be at 1045 Sansome Street, San Francisco. Associates of the firm include J. K. Rode and F. T. C. Gist.

GEORGE E. KENNEDY NEW REPRESENTATIVE

George E. Kennedy has been appointed architectural representative for the Nelson Stud Welding Division of Gregory Industries, Inc., for the west coast, according to an announcement by Verne C. Bender, western branch manager.

Other personnel changes include transfer of Walter E. McArthur, dean of the Nelson sales force from Cincinnati to Los Angeles.

PABCO PERSONNEL APPOINTMENTS MADE

E. V. Gear has been appointed general advertising manager of Pabco Products, Inc. of San Francisco, according to an announcement by E. W. Fish, Pabco vice president.

At the same time Fish announced John W. Hoover, regional manager of Pabco's Southwest Region in Dallas, Texas, had been named Merchandise Manager of the Floor Covering Division, with headquarters in San Francisco. Bruce G. Hanson was appointed to the position being vacated by Hoover at Dallas.

NEW GAS PIPE BY METALBESTOS

A new, improved line of double-wall insulated gas vent pipe, called RV Metalbestos, has been announced by William Wallace Company, Belmont, California.

The new venting system, with complete line of round fittings in all commonly used sizes, is designed to withstand severe abuse and is light-weighted for convenient handling and easy installation. No screwing or cementing of joints is required; has a rugged steel outer pipe for maximum protection; aluminum inner pipe for fast heating; space between outer and inner pipe eliminates fire hazards. Approved by Underwriters' Laboratories. For full information write to manufacturer.

STOCKTON TO GET NEW BANK BUILDING

The Anglo-California National Bank of San Francisco has acquired a site in the 500 block on east Webster street in Stockton and will soon erect a new bank building costing approximately $400,000.

The new building will be two-story, with basement, structural steel and reinforced concrete construction; 70x100 ft.

Mayo, Johnson & De Wolf, Stockton, are the architects. Arthur A. Sauer, Sacramento, is the Structural Engineer; Daniel Vandament, San Francisco, is the Mechanical Engineer, and Williamson & Volmer of Oakland, are the Electrical Engineers.

LANDSCAPE ARCHITECTS ELECT C. MASON WHITNEY

C. Mason Whitney of Berkeley was elected president of the California Association of Landscape Architects at their recent annual meeting in Berkeley, succeeding Robert M. Babcock of Oakland.

Other new officers elected included John

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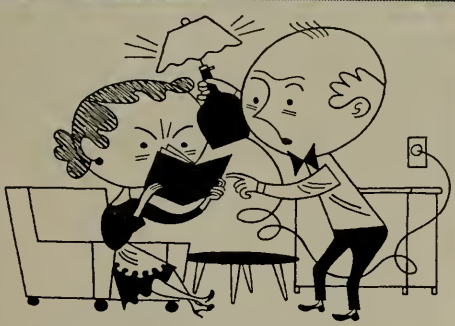

You wouldn't wire a home for one lamp

Of all those "extra" features that contribute to what is nowadays often called the "livability" of a home, perhaps built-in telephone facilities cost the least and please the prospective buyer the most. He now considers modern telephone arrangements as important as enough electric outlets. And just as he wouldn't buy a house wired for only one lamp, so today he expects to find his home equipped with more than one telephone outlet.

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Staley, San Francisco, first vice president and Douglas Baylis, San Francisco, second vice president; Mai Arbegast, Berkeley and Lynn M. F. Harris, Oakland, directors.

Whitney announced a meeting of the California Council of Landscape Architects would be held October 21-22 at the Ahwahnee Hotel, Yosemite.

KAISER TO BUILD OAKLAND SKY-SCRAPER

Henry J. Kaiser announced recently the purchase of a site on Lake Merritt in Oakland on which he will construct a multi-million dollar office building and shopping center, to be known as Kaiser Center.

Fritz B. Burns, Los Angeles real estate developer, past president of Kaiser Community Homes and past president of the National Association of Home Builders, will serve as president and general manager of the center.

ARCHITECT SELECTED

Charles F. Strothoff, architect of San Francisco, has been commissioned by the Board of the Richmond (Calif) High School District to design plans and specifications for conversion of the Potrero Elementary School building into the new Granada Junior High School.

ZONING PERMIT FOR HOTEL APARTMENT

Bryan Epp & Associates of San Francisco have been granted a zoning permit for construction of a hotel and apartment building to be built on the corner of Pine and Mason streets in San Francisco.

The new building will comprise 14 stories, 4 levels of garages with basement, and will be of reinforced concrete construction with some structural steel.

Estimated cost of the project is $1,500,000. George Meu, San Francisco, is the architect.

FLANGELESS WIREWAY HINGED COVERS

A completely new flangeless wireway, equipped with hinged covers which swing open to permit faster, easier installation of wiring, has just been made available. Also includes auxiliary fittings with hinged covers to make possible the installation of a complete, unbroken wireway system in which conductors can be "laid-in" rather than "fished through," as with conventional type covers.

Preassembled covers are hinged to the wireway and fittings on one side of their length; available in five sizes—2½" x 2½" to 8" x 8" and standard lengths 1 to 5 ft.; auxiliary fittings include 90 degree elbows and pull boxes, "T" fittings, 5 degree elbows, closing plates, "U" connectors and panel adapters. Complete price information and catalog from manufacturer, KEYSTONE MFG. CO., 23328 Sherwood, Center Line, Michigan.

WAYNE EARLY NAMED SALES MANAGER AIDE

Wayne Early has been named assistant sales manager in charge of plywood sales of the St. Paul and Tacoma Lumber Company, Tacoma, Washington, according to W. R. Garnett, general sales manager of the firm.

Early succeeds Corydon Wagner III, who has been assigned to the company's timber and raw materials divsion.

ELEMENTARY SCHOOL FOR COTTONWOOD

Architect Clayton Kantz of Redding is completing plans for construction of a three-classroom addition to the Evergreen Elementary school near Cottonwood in Tehama county.

The addition will be of frame and stucco construction.

ARCHITECT SELECTED

The Alameda county board of supervisors recently commissioned Architect Irwin M. Johnson of Oakland to draft plans and specifications for construction of a new Exhibit Building at the Alameda County Fair Grounds in Pleasanton.

EDSEL CURRY NAMED SALES MANAGER OF WEBER-HALL

Edsel Curry has been appointed sales manager of the WeberWall division of Weber Showcase & Fixture Company of Los Angeles, according to a recent announcement by Karl Weber, president of the firm.

Curry, with the organization since 1950, was most recently architectural coordinator for the company. He is a graduate of the University of Southern California and served as an Ensign in the Navy during World War II.

SCHOOL BONDS APPROVED

Voters of the Whisman Elementary School District of Mountain View, Santa Clara county, recently approved the issuance and sale of $250,000 bonds with funds to be used in construction of new elementary schools in the district. A California State Aid grant of $1,000,000 will also be used in the construction program.

BENJAMIN T. CARDINAL NAMED MANAGER FIR DOOR INSTITUTE

Benjamin T. Cardinal, Ann Arbor, Michigan, has been appointed Managing Director of the Fir Door Institute with headquarters in Tacoma, Washington, and

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Cardinal has a background of training and experience in the wood products field and was previously midwest field representative for the Douglas Fir Plywood Association.

FOREST PRODUCTS FELLOWSHIP FUND

The "Lawrence Ottinger Forest Products Fellowship Fund" has been established at the University of Washington College of Forestry by the U. S. Plywood Corp'n to perpetuate the name of the company's founder, Lawrence Ottinger.

The perpetual fund will be devoted to creating graduate fellowships in the field of plywood, wood particle board and adhesive development. A portion of the fellowship fund was made up voluntarily by contributions from company employees, friends and colleagues of Ottinger, who founded the company in 1919.

NAMED WEST TEXAS MARLO REPRESENTATIVE

Bob Carow has been named West Texas representative of the Marlo Coil Company and will maintain office in Lubbock where he has headed his own engineering firm since 1953.

Carow is president of the West Texas Chapter, American Society of Heating and Air Conditioning Engineers.

GYPSUM BOARD PLANT AND NEW PLASTER MILL

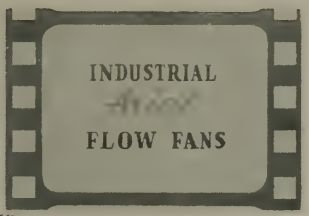
The Kaiser Gypsum Company, Inc Oakland, recently announced it had acquired an industrial site and would soon construct a gypsum board plant and construct plaster mill buildings, near Pittsburg, California, on the Sacramento River.

The project will comprise 6 buildings, to provide facilities for a calcimining plant, wallboard plant, machine shop, warehouse, paint and joint cement plant, offices, laboratory, storage buildings, crushing plant; and construction will be of structural steel, steel frame, corrugated metal exterior, and reinforced concrete construction.

Estimated cost of the project is $5,000,000.

AEROVENT RELEASES NEW FAN ENGINEERING FILM

A new 16-mm sound film in color covering "Industrial Axial Flow Fans," prepared as part of an educational program for use in the recent Industrial Ventilation Conference, has been released by the Aerovent Fan Company of Piqua, Ohio.



The film describes the three basic types of axial flow fans, their inherent characteristics and methods of testing employed in modern fan engineering laboratories.

The film is available for Engineering, Architectural, Plant Maintenance and Building Contractors meetings, by writing Aerovent Fan Company, Inc., 723 E. Ash St., Piqua, Ohio. The film runs about 12 1/2 minutes.

ARCHITECT SELECTED

Architect Clarence Felciano of Santa Rosa has been commissioned by the Redding Elementary School District to draft plans and specifications for construction of the Manzanita Elementary School addition and an addition to the Cypress Elementary School.

Construction will be of frame and stucco.

U. W. STUDENT WINS SCHOLARSHIP AWARD

Donald C. Larson, junior year student at the University of Washington, and majoring in metallurgy, has been chosen winner of the first scholarship in power

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metallurgy established this year by the Metal Powder Association to encourage engineering students to specialize in powder metallurgy in order to help fill the need for trained personnel.

The scholarship of $500 was available to any student majoring in metallurgy who was completing his junior year in an accredited university or college and who had intended in his senior year to pursue one or more courses in powder metallurgy.

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GENERAL CONTROLS FIELD REPRESENTATIVE

Edwin W. Potter, a veteran of ten years in the field of appliance sales and distribution in Southern California, has joined General Controls Company as field representative specializing in contacting architects and builders throughout Southern California.

He will maintain offices in Glendale, California.

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JOHN STORRS, Architect

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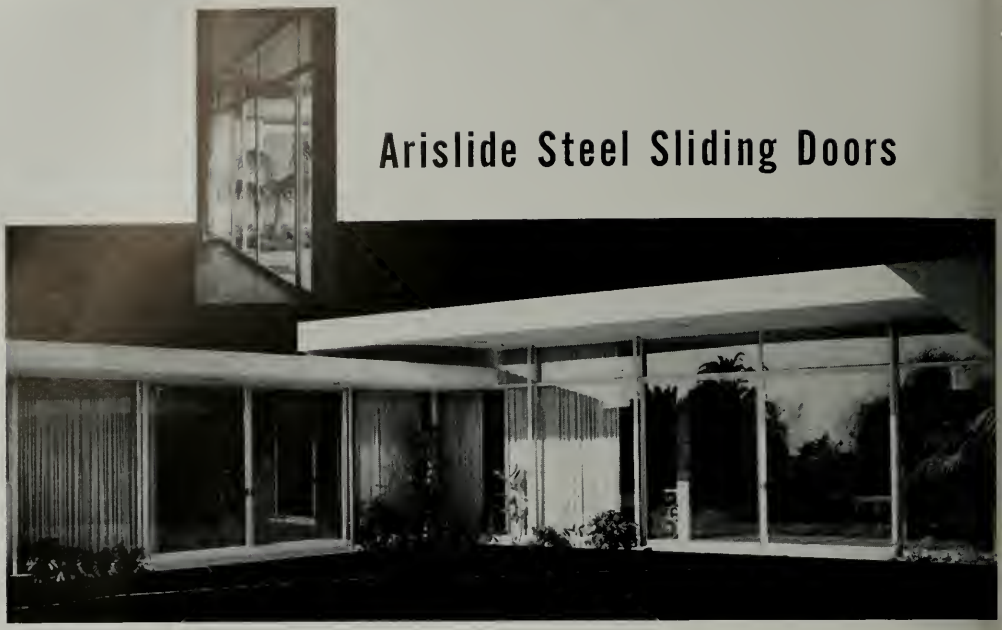

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COVER PICTURE

RESIDENCE

Mr. and Mrs. John Hallinan

Portland, Oregon

Architect John Storrs has added a touch of Riviera atmosphere to this modest Portland home by use of dramatic wide-eaves, which overhang a deck that is used as an all-year-'round family living area.

For additional details and photographs on western patios, porches and pavilions see Page 17.

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. EDITORIAL NOTES .

GOOD GOVERNMENT

Good government is not an intangible something-or-another, found only in Washington, D. C., or in the ornate surroundings of the state capitol building, or in the confines of the city mayor's office, or the chamber of the city council.

Good government is an issue of basic principles of personal, business and economic conduct that must be established on the Main Street of every town and city, and furthermore must be determined by logic and clear thinking of individuals in discussions with members of the family in the home, with associates in business, and in social and civic interests.

The extent to which government becomes a part of your every-day life is dependent upon how much you wish government to participate. Competition of government with private enterprise is going to be regulated by your thinking and your actions. Whether you wish the government to assume the responsibilities of your welfare and thereby make no effort or provision for self independence, or whether you wish to provide for your own future, is again a matter that you must determine. Today's government represents big busines, and whether you like it or not, it is going to cost vast sums of money in the form of taxes collected from you to maintain the program of government as it is recognized today.

The future is up to you, and you can not leave such an important factor in your life, and the lives of your children, up to any one to determine for you.

* * *

The seven Oregon and two Washington hardboard plants use 700 dry tons of wood chips per day.

* * *

PRIVATE POWER PROJECT

Would you, as a taxpayer, be interested in the federal government saving $887-million dollars collected from you and other taxpayers?

Taxpayers would net a clear gain of $487-million if private investment rather than the federal government were to develop the proposed electric power project at Hells Canyon, Idaho.

Another $400-million, estimated cost of the proposed project, would be saved if Congress gives investment authority to go ahead.

The Idaho Power Company, which seeks to develop power at the Hells Canyon site, would pay nearly $10-million annually in federal, state and local taxes during the fifty-year period of company operation provided by law, or a total of$487-million. A federal project would produce no tax revenues during the like period.

If the federal government develops the power, taxpayers in all parts of the nation would be required to subsidize the project while only residents of the immediate and adjacent area would benefit.

Under private development, the cost would be paid only by customers of the Idaho Power Company, which is as it should be.

* * *

The 13% increase in forest and shelterbelt plantings in 1954 over 1953 is entirely due to increased planting on private lands. Planting by federal and other public agencies decreased.

* * *

PROFESSIONAL ENGINEERS

Allison C. Neff, president of the National Society of Professional Engineers, a nation-wide organization representing more than 36,000 engineer members, has appealed to the nation's publishers to help stimulate interest in high school mathematics and science courses.

According to Neff, only about twenty-five per cent of our high school students now study algebra; about twelve per cent study geometry; and many small and even some large high schools, offer no courses in the physical sciences.

America is just entering the first phase of the so-called atomic age and if the above figures are correct, we find ourselves in the amazing position of having a declining percentage of high school students enrolled in basic courses essential to engineering study for professional careers.

A high school background in elementary mathematics and science is a "must" for an engineering career, and with the fall school semesters about to begin it might be well to take a few moments and check with local school authorities to determine if proper pre-engineering courses are available.

It is also an excellent time to "take stock" of young men and women who offer engineering education possibilities, as the future course of American industrial achievement and national defense will be largely dependent upon the engineering skills which can be developed from the generation just entering, or now in high school.

* * *

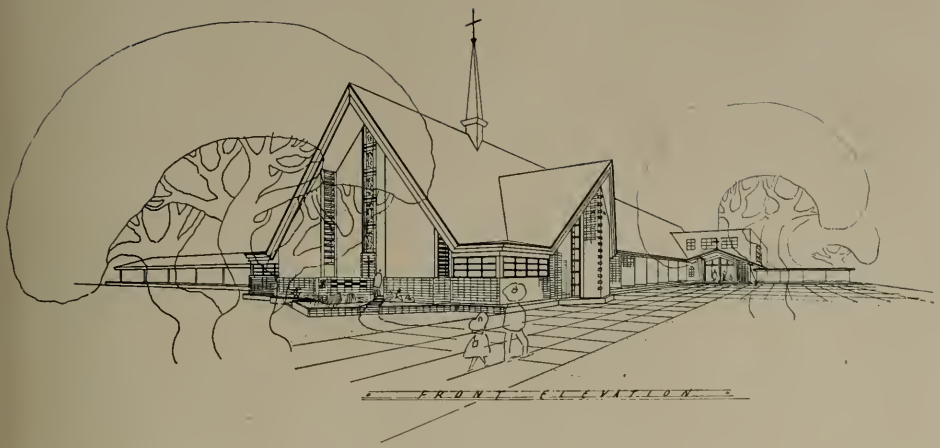
About one out of every four acres in the country is federally controlled.

* * *

CHURCH BUILDING

Americans will invest more than $70-million in religious construction this year, a figure which will set a new all-time high in this type of building.

Even though current expenditures may appear to be great, it is estimated the present trend will continue for the next ten years and that some 70,000 churches and synagogues will be constructed, plus an additional 12,500 types of religious buildings, parish houses, Sunday schools and similar buildings.



PROPOSED SANCTUARY

GRACE LUTHERAN CHURCH

MODESTO, CALIFORNIA

One of the newer Church structures to be erected in the San Joaquin Valley of Central California, which is designed specifically to be utilized in the field of religious worship, is the striking Sanctuary of the Grace Lutheran Church in Modesto.

This building, by Architect Leif L. Nielsen, A.I.A., Piedmont, is interesting and attractive in design and yet is conservative to the extent that while the structure attracts immediate attention it is at the same time contemporary to the point of harmonizing completely with its surroundings.

Included within the new building are many of the newer facilities of Church design and furnishings which contribute to the utility use of the structure and make it one of the most interesting projects now under way in Church planning and construction.

LEIF L. NIELSEN

Architect

NEWS and COMMENT ON ART

UNITED NATIONS SESSIONS INCREASED ART INTEREST

During the week of the United Nations Commemorative Session there were 14,554 visitors to the galleries of the San Francisco Museum of Art to see the Museum's two special exhibitions, "Art in the 20th Century," and "We the Peoples."

FAMED ART SPEAKERS AT SANTA BARBARA

A veritable who's who in the arts comprised the list of distinguished speakers who appeared on the campus of the University of California, Santa Barbara College, for the summer session program "The Arts at Mid-Century."

Most of the arts were represented including Richard Neutra, architect; Kem Weber, designer; Francis Rich, sculptress; Sister Mary Corita, religious art; Rico Lebrun and Howard Warshaw, painting; Ernest Krenek, composer; and two scholars from the Los Angeles campus, Frederick Wight, professor of art, and Ralph Freud, chairman of the theater arts department.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has arranged the first of a group of special exhibitions for the fall season, including:

EXHIBITIONS: Painters of Venezuela; Painting by Max Beckmann; German Impressionist Prints; Sculpture by Wotruba of Austria; and the John Marin Memorial Exhibition, a comprehensive exhibition of the work of John Marin (1870-1953). Included are

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park, San Francisco

CALIFORNIA DESIGNED

The Newest in California Designed Home Furnishings and Accessories

40 oils, 69 watercolors, and 13 works in graphic media. The exhibition has been organized by the Art Galleries, U. of C. at Los Angeles, and will be shown in the east this winter.

SPECIAL EVENTS: Lecture Tours of the Museum each Sunday at 3:00 o'clock, Gallery Tours each Wednesday evening at 8:30. The Studio Classes in Art for the Layman, Adventures in Drawing and Painting, and the Children's Saturday morning Art Classes are in recess for the summer and will be resumed in September.

Over two hundred and fifty examples of California Designed home furnishings and accessories representing the best typically California solutions to the problems of design and good workmanship are now being shown at the M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco.

Two groupings of creations being exhibited are shown on this, and the opposite left hand page:

ILLUSTRATED at left:

Desk Walnut and brass	Designer: Carlos Fonseca, San Francisco Manufacturer: Fonseca Industries, San Francisco
Pivot chair, plastic and steel	Designer: Charles Eames, Pacific Palisades Manufacturer: Herman Miller, Zeeland, Mich.
Sofa Chrome plated steel Foam rubber cushions	Designer: Charles Eames, Pacific Palisades Manufacturer: Herman Miller, Zeeland, Mich.
Handwoven upholstery Wool, jute, cotton, rayon	Designer: Martha Pollack, Los Angeles Manufacturer: as above
Cellophane—moisture proof and heat resistant cellophane silk and cotton Flame color	Designer: Dorothea Hulse, Los Angeles Manufacturer: as above

ILLUSTRATED below:

Drapery or casement Hand-screened cotton	Designer: Bernard Kester, Compton, Calif. Manufacturer: as above
India silk rug	Designer: J. L. Groves, San Francisco Manufacturer: from Gumps
Furniture Rattan and rawhide	Designer: Eleanor Forbes, San Francisco Manufacturer: McGuire Co., San Francisco
Stoneware	Designer: Peter H. Voulkos, Los Angeles Manufacturer: as above

Installed for Public showing following plans designed by the Architectural firm of Campbell and Wong.

NEWS and COMMENT ON ART . . .

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, which is under the direction of Thomas Carr Howe, Jr., is offering the following schedule of exhibits and events.

EXHIBITIONS: Loan Exhibition of French Paintings; World at Work, an exhibition of paintings and drawings commissioned by Fortune, presented on the occasion of the magazine's 25th anniversary. Sponsored and circulated by the American Federation of Arts; Paintings by Muriel Bacon; Paintings by Teruko Yokoi; Recent Terra Cottas by Adaline Kent; and an exhibition of Photographs by H. Bowden.

The ACHENBACH FOUNDATION FOR GRAPHIC ARTS exhibit at the Museum includes America Today, a show by contemporary artists; and the Loan Exhibition at the San Francisco Public Library is an exhibition of Europe As Seen by American Printmakers.

SPECIAL EVENTS: Organ Recital each Saturday and Sunday at 3:30 P. M. The Summer Painting Classes for Children, ages 6-14, are held Tuesday and Thursday at 10 o'clock in the morning.

Museum is open daily.

HELEN BREGER EXHIBIT EXHIBITS WORK

A special showing of Oils, Gouaches and Drawings by Helen Breger, now of San Francisco, is being exhibited during August at 2095 Union Street.

Helen Breger was born in Vienna, and studied Art at the Academy for Women and Design at the Textile Design School. She also studied at the Art Student League in New York.

Her work has appeared widely in magazines and newspapers.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is presenting the following exhibitions and special events for this month:

EXHIBITIONS: W. R. Cameron, Watercolors; San Francisco Art Association, Show No. 4, comprising paintings by Wally Hedrick and Julius Wasserstein, and Sculpture by Jeremy Anderson; Three Centuries of Print-making in America, from the Collection of the International Business Machines Corporation; Goya Drawings and Prints, from the Prado and Lazaro Galdiano Museums in Madrid, Spain; California Designed, an exhibit of contemporary home furnishings; "I Remember Mama," an exhibition of costumes and accessories of the late Victorian and Edwardian periods; English and Irish Glassware, bequest of Julia May Babcock; and Museum Class Work, and exhibition of students ages 9-14, shown in the Children's Room.

SPECIAL EVENTS: Classes in Art Enjoyment, now in recess, will be resumed September 17; Seminars in the History of Art, informal discussions illustrated by lantern slides, reproductions and original works, are given on Thursday mornings 10:30 to 11:30; Painting Exercises for Beginners, Painting Workshop for Amateurs, Painting for Pleasure and Classes for Children are all included in the Art Enjoyment program.

LOS ANGELES ART GALLERIES POPULAR

More than 33,000 persons visited the Art Galleries on the Los Angeles campus of the University of California during 1954-55 academic year, according to Professor Frederick Wight, director of the galleries.

Among major shows exhibited were the Charles Sheeler retrospective exhibit; the Fred Grunwald master prints; the Roy and Marie Neuberger collection of modern American Art; "The Changeful Earth," a history of European landscape painting; and the personal collection of Mr. and Mrs. David L. Loew.

Another popular attraction was the annual exhibition of works by students in the department of art, and the Sheeler exhibition, which was organized by Wight, toured the nation after appearing at the Los Angeles campus.

Permanent collections at U.C.L.A. include the Willitts J. Hole collection of 47 paintings by master artists, the James Kennedy collection of English landscapes, and a collection of 300 valuable prints by Fred Grunwald.

ART SHOW AT CALIFORNIA STATE FAIR OUTSTANDING

Thirty-six counties of California are represented in the 453 selections which comprise the Art Show at the California State Fair and Exposition scheduled to be held in Sacramento, September 1-11.

Selections were made from a large entry list of 1200 submissions.

Members of the jury making selections in the arts—oils, water colors—were Rex Brandt, Corona del Mar; Charles Surendorf, Columbia; Millard Sheets, Claremont; Leon Goldin, San Francisco; Karl Kasten, Berkeley. Crafts jury members were Charles H. Hays, Berkeley, Margaret De Patta, Napa; Kay Geary, North Highlands; Jean Ames, Claremont; Marguerite Wildenhain, Guerneville; Rudolph Schaeffer, San Francisco. The jury for sculpture consisted of Don Birrell, Vacaville; Joy Cain, Sacramento; Robert Watson, Berkeley; and Elio Benevenuto, San Francisco.

NEW HOME OF

BOOK PUBLISHING HOUSES

HOUGHTON MIFFLIN COMPANY & SCOTT FORESMAN AND COMPANY OF CALIFORNIA

Palo Alto, California

JOHN S. BOLLES, A.I.A.

ARCHITECTS AND ENGINEERS

Construction is well under way on the book publishing houses for Houghton Mifflin Company and Scott, Foresman and Company on California Avenue in Palo Alto.

These buildings are part of the industrial development under the guidance of the Business Administration office of Stanford University. Both concerns are primarily interested in the educational book field and are, consequently, fitting additions to the Stanford industrial area.

The Houghton Miffin Company building represents a total investment of around $200,000, exclusive of land lease, and will employ in the neighborhood of twenty-five people.

The Scott, Foresman project is contemplated at roughly twice the size of the Houghton Mifflin building, although the warehouse portion is not yet under construction.

THE

SECURITY BANK OF TROUTDALE

TROUTDALE, OREGON

MORGAN H. HARTFORD
A.I.A.
Architect

PORTLAND,
OREGON

BUILDING SITE:

Northwest corner of Celestia and Dora Streets in the fast growing community of Troutdale, Oregon.

BUILDING:

Modern architectural design with dimensions of 32 feet wide, 70 feet long, and 18 feet high.

CONSTRUCTION:

Combination reinforced concrete and masonry blocks with laminated roof beams, built-up roof and metal sash, asphalt tile floors, acoustical tile ceilings, painted walls of concrete and masonry block, hot water heat, and incandescent lighting.

FEATURES:

Safe deposit vault, drive-up Teller window, Night depository, Birch bank fixtures, mezzanine for future expansion and 7000 square feet of asphalt paved off-street parking.

GENERAL DATA:

The Security Bank of Troutdale, Oregon, is an independent bank with articles of incorporation being approved on September 7, 1953. Deposits are insured by the Federal Deposit Insurance Corporation, and the bank is a member of the Oregon Bankers Association and the American Bankers Association.

Required capital structure of the Bank has been completed at over $100,000.00 and enlargement of the capital structure above this amount is currently under consideration.

GENERAL CONTRACTOR:

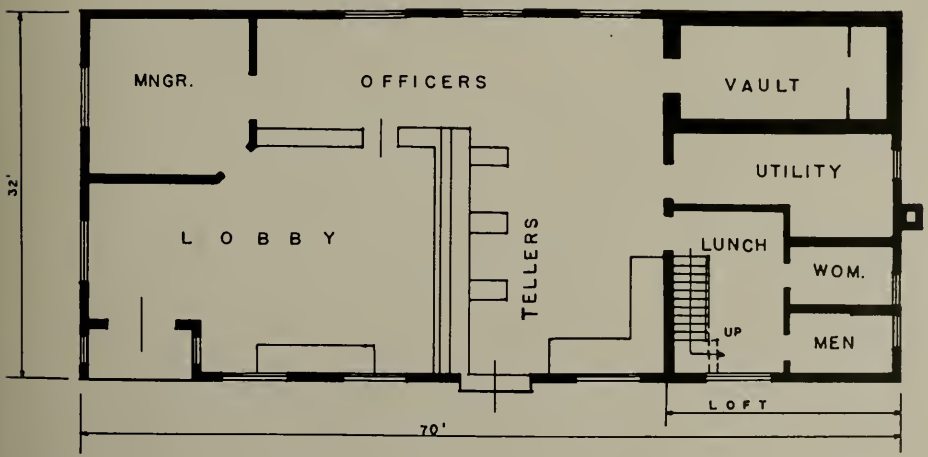
Heigele Home Construction Company of Portland, Oregon.

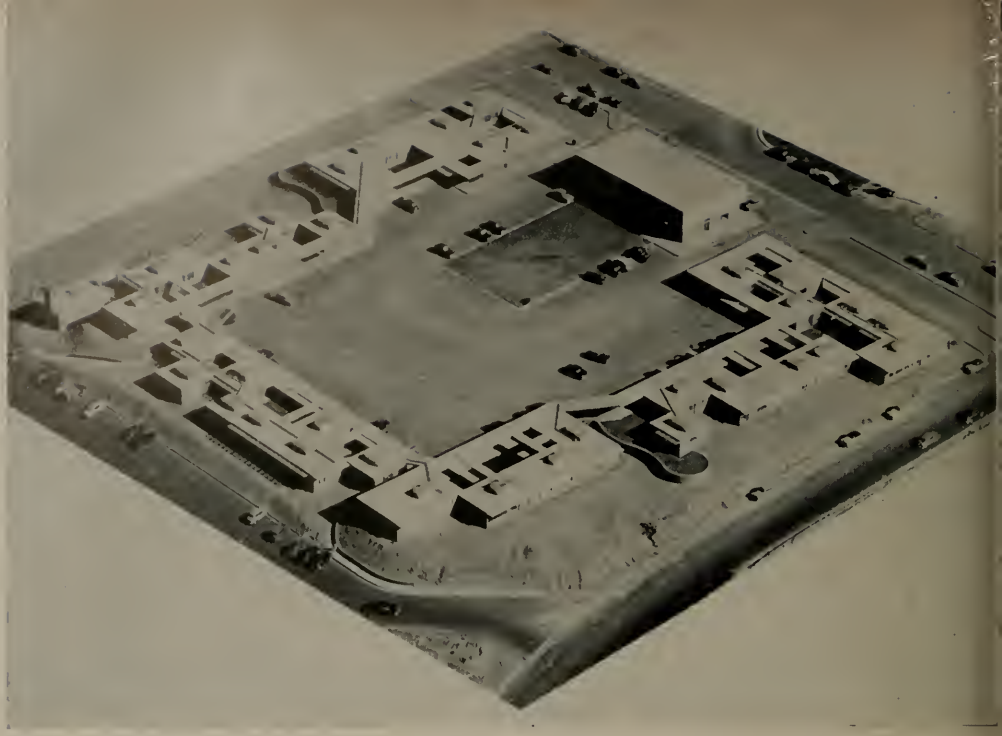
COST:

$27,605.00 for Building.
$1,950.00 for Bank Fixtures.

Officers and Directors of the Security Bank of Troutdale include:

Richard Knarr, Chairman Board of Directors.
Lloyd V. Weiser, Director.
A. D. Kendall, Director.
M. B. McKay, Director.
A. R. Fry, Director.
Harold E. Wheeler, Director.
Chas. B. Davis, Manager.





AERIAL VIEW OF MEDICAL ARTS SQUARE, Albuquerque, New Mexico.

PLANNING A SUCCESSFUL MEDICAL-DENTAL CENTER

By FRANK EMERY COX, Sales Research and Business Development Analyst

The building of a Medical-Dental Center where multiple occupancy of doctors, dentists, specialists, and other professions are grouped under one roof presents problems that are quite vexing unless handled in a very adroit fashion. In this article three different types of projects are analyzed:

1. MEDICAL ARTS SQUARE, Albuquerque, New Mexico, (Max Flatow and Jason Moore, Architects) — This is a large center accommodating several score of tenants. It has been outstandingly successful.
2. GROSSMONT PROFESSIONAL BUILDING, La Mesa California, (Carl Hotten, Architect) — This project near San Diego is a medium-sized venture.
3. WALNUT CREEK CLINIC, Walnut Creek, California (William H. Young, Architect) — This is a small center accommodating three tenants, located near Walnut Creek, California.

MEDICAL ARTS SQUARE

Albuquerque,
New Mexico

OWNERS:
MEDICAL ARTS
BUILDING
INCORPORATED

ARCHITECTS:
MAX FLATOW and
JASON MOORE

The building is owned by a corporation formed by the doctors and dentists who were the original occupants of the center. Each doctor as a tenant is a stockholder with an initial investment of $5,000 in common stock in the corporation. In addition, a limited issue of $200,000 in preferred stock was sold, partly to the doctors in the project and to outside buyers.

The total cost of the project was $665,264. Until the initial loan is amortized, each doctor pays to the corporation a rental of $3.25 per square foot per year. At the end of the amortization period, the rental can be reduced to cover maintenance costs and expenses and to build up a permanent building fund for future expansion. A closed corporation will result.

The doctors in the center are independent practitioners as opposed to a clinical plan. Therefore, each office has its own entrance, waiting room and functional rooms.

The interior court provides what is considered adequate parking for patients. This large court enclosed by the offices is reserved exclusively for patient

ILLUSTRATION at top—Potio view of covered walkways of Medical Arts Square. They are lighted in the event of use at night and covered for pedestrian traffic as protection against sun and rain.

ILLUSTRATED at left—View of abstract identification symbol in front of the Medical Arts Square. Note the location of the shops on the first floor. View gives idea of construction.

parking so that he is able to drive a car directly to the front door of his doctor. Covered walks provide a connecting link between the offices.

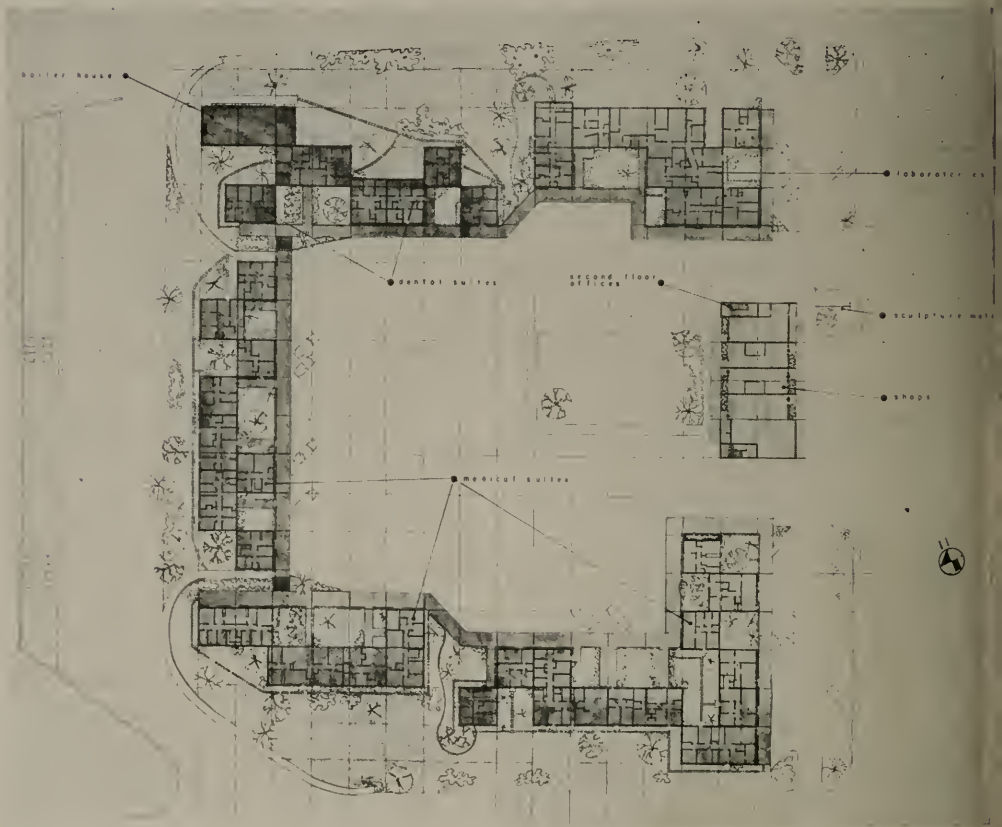
Each office suite was designed to meet the needs of the individual doctor occupying it. The offices were arranged in an openess of plan around the perimeter of a five-acre section of ground to allow flexibility in planning and give room for expansion. This openness in planning is appropriate for the climatic conditions of an area such as Albuquerque and could be conceived in other localities where similar climatic conditions existed.

Careful study of the lighting needs required in doctors' offices resulted in window and glass arrangements which give maximum daylight into each examination and treatment room. Although each doctor's suite is different in many details, almost all have a private waiting room, office, and three or four examining rooms. Combined with these, generally, is a small laboratory and toilet facilities.

Individual heating and air conditioning units are located on the roof of each unit to provide specific control in each office.

The shops on the ground floor of the main building are rented for $7.50 per square foot per year. These shops include a pharmacy, optical supplies, restaurant,

FLOOR PLAN of Medical Arts Square showing layout of various suites and the grouping of different professional offices. The dental suites are grouped in one section and the medical suites in another. The laboratories have a section to themselves. It should be noted that there is opportunity for parking of patient's cars in front of each office. Additional parking is available outside the Square. This front door parking has proved to be exceptionally popular for patients and doctors alike.



and similar related shops. The second floor of the two-story building is reserved for office rental space to accommodate doctors who are not stockholders in the corporation. The space available for these tenants is very limited.

A private parking area is provided at the rear of the Square for the doctor-dentists and their employees. In this area a corporation-owned service station is provided, and a maintenance shop with a Building Superintendent's office is located there next to a main boilerhouse for the entire project.

After three years of operation, the center has proved entirely successful, both from a financial angle and for meeting the discriminating requirements of the public. In almost every case, the practice of the individual doctors who occupy the project has developed in volume compared to that which existed before becoming tenants of Medical Arts Square.

INTERIOR—private office, shows comfortable surroundings and relaxing environment built into all parts of the center. Window treatment to prevent glare.

GROSSMONT PROFESSIONAL BUILDING, La Mesa, California. Drug store strategically located for center traffic as well as transient.

GROSSMONT PROFESSIONAL BUILDING

La Mesa, California

OWNERS: Terradel Corporation

ARCHITECT: Carl Hotten

The name of the owners of this project originates from "terra firma," meaning "land," and "del," an abbreviation for "development." In other words, "Terradel" literally stands for "land development." The Grossmont Professional Building is one of several projects in which this firm is interested.

The income and expense picture of the venture has worked out very close to the anticipated projection with the exception that in two of the suites minor changes were made. The cost of these alterations will be amortized over the term of the lease, increasing the actual income but not materially affecting the net when compared to the overall investment.

The front suite is occupied by an opthalmologist. Because of his specific requirements, this suite has a special 20-foot refracting room which rents for a slightly higher figure than the original 25c per square foot per month planned to be asked. This specialist has a total of 1138 square feet and pays 28c per month for the first 500 square feet and 25c for the remainder.

The next suite is occupied by three obstetricians. They pay 28½c per foot on a five-year lease. The rent includes approximately $2200 of changes made which is being amortized over the term of the lease.

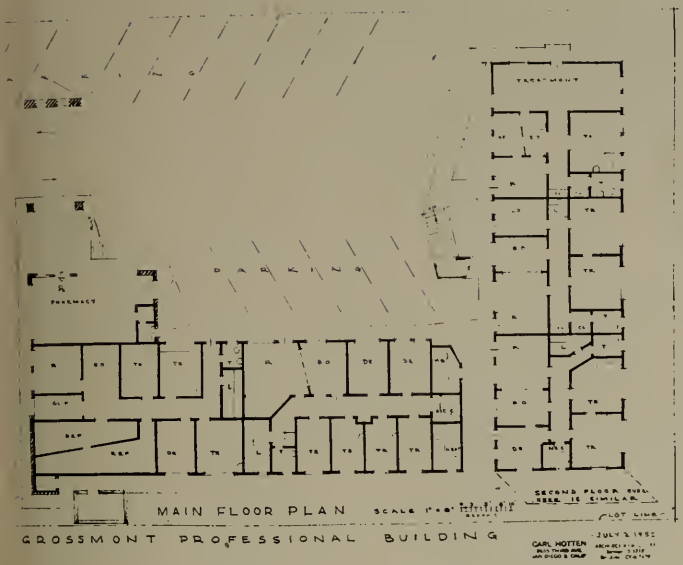
The center suite in the ground floor of the rear building rents for 27c per square foot per month to a general surgeon. This amounted to an actual increase in rent from the original anticipation as no changes were made in the plan.

The balance of the building is rented for 25c per square foot with the exception of the pharmacy. The drug store is leased for $125 per month against 8% of gross sales instead of the original 5% anticipated. Several pharmacists competed for the privilege of operating the drug store. This put the owners in an excellent bargaining position.

The corporation was originally organized for the purpose of developing income real estate. The Grossmont Professional Building is the first enterprise. The corporate form of organization was chosen because of the elimination of personal liability of the individuals and the ease of transferring real estate in corporate form against that where it might be owned by numerous individuals. The corporation is composed of two doctors, a physical therapist, an architect, an industrial engineer, a retired newspaper man, and a real estate broker.

The cost of the lot on which the building was constructed was $15,000. The total cost of the building was approximately $118,000 including the various changes made to satisfy the tenants. In financing the project, it was originally anticipated to obtain a $55,000 loan. Instead of that, it was possible to secure an $80,000 loan.

CLOSE-UP view of two story portion of the Grossmont Professional Building, indicating type of architecture and construction.



MAIN FLOOR plan of the Grossmont Professional Building, showing relative sizes and relationships of the different suites and the rooms, making each one into convenient, comfortable quarters.

The following anticipated income and expense statement outlines the original expectations so far as revenue and operational costs were concerned. As stated in the beginning, the actual realization of the financial structure has worked out substantially better than that which was anticipated and which is included in the following statement:

GROSSMONT PROFESSIONAL BUILDING
Operational Statistics
Anticipated Income and Expense Statement

Anticipated Gross Income	
9 Suites	
6248 sq. ft. @ $.25 per sq. ft per month	$ 1,562.00
(includes utilities and janitor)	
Pharmacy leased for $125 per month minimum with 5% of gross sales .	1,687.00
Anticipated Gross Annual Income .	20,244.00
Anticipated Gross Expenses	
Taxes —	
City, County, Irrigation District .	1,400.00
Insurance	
fire $400	
liability 25	425.00
Utilities—monthly $200 annually . .	2,400.00
(A survey of comparable buildings indicates .03 per sq. ft to be normal cost)	
Janitor monthly $175.00 annually .	2,100.00
Custodian (grounds) monthly 25.00 annually .	300.00
Repairs & Maintenance exterior annually .	500.00
(Interior by tenants)	
Management (5% of gross income) .	1,012.00
Total expenses	8,137.00
Net Income	12,107.00
Assuming the building to be encumbered with level payment type loan of $55,000 amortizing in 15 years at 5% interest:	
Monthly payments would be $434.94 annually	5,219.28
Net operating gain	6,887.72
Average equity gain over life of loan	3,667.00
Annual profit	$10,554.00

Houses two dentists and one psychiastrist. Open space in center portion has been made into aquarium. Auto parking is in rear.

WALNUT CREEK CLINIC

WALNUT CREEK, CALIFORNIA

OWNER: George D. Mallory, D.D.S.

ARCHITECT: William H. Young

This small Medical-Dental Center is owned entirely by Dr. Mallory who occupies one of the three suites. The other suites are occupied by another dentist and a psychiatrist. Each suite contains approximately a thousand square feet. Parking is provided in the rear for patients, doctors and employees.

It is located in a suburban area and the design and character of the building and landscaping adapts to this environment. One of the features which Dr. Mallory has included in his building as an interest developer is a sizeable aquarium. This is particularly unique because it gains the attention and holds the interest of children as well as adults while waiting for treatment.

The venture has been very successful from an investment point of view and the tenants who share the building with the dentist-owner are very well pleased with the freedom of activity they enjoy as well as the well planned commodious facilities which are provided.

Attractive rustic, rough-textured decking and frame work of Douglas Fir in the Eugene, Oregon, residence of Dr. and Mrs. Robert E. Nye. Norris M. Gaddis, Architect.

OUTDOOR LIVING in the WEST

By ARTHUR W. PRIAULX

There is nothing particularly new about porches, patios and pavilions, which are as old as recorded history of architecture, but these adjuncts to better outdoor living are hitting new highs of interest, new peaks of popularity as more and more families seek a closer rapport with the out-of-doors.

An exact definition of a porch or patio is difficult, and even more so today with the enormous variety of these sheltered and semi-sheltered out-of-doors living areas being designed. A porch may well range from a simple deck, with or without roof, to a fully enclosed and heated room. In general a porch has both a roof and floor. A pavilion is a detached lounging area, usually with some type of louvred or tent-like roof device. It generally has a designated floor, such as wooden decking, brick or poured cement. Pavilions may well be a simple screened area for seclusion. Patios take limitless form, and may either join the home or be remote. These loosely defined outdoor living rooms generally do not have a roof, and may use one or more walls of the home, a special screen or wall or hedge for definition of boundary.

The increasing accent on porch, patio and pavilion living has prompted furniture makers to bring out

PAVILIONS in the R. E. Mahaffay home, Portiond, Oregon, are formed from a permanent wooden louvred roof screen, a design that makes outdoor living more pleasurable for the family. (Illustration at left.)

complete lines of casual designs in moderately-priced lounging furniture. Because of their rustic affinity with the outdoors, redwood and cedar furniture is particularly popular. Sawbuck tables and benches, chaise lounges and all sorts of chairs are manufactured from these woods.

Architects and landscape designers have gotten a great deal of pleasure and enjoyment out of this field of design and planning because so much can be done with so little. It is possible to achieve striking elegance by merely combining a few man-made timbers, a brick or stone fireplace or a green hedge with what

ANOTHER example of clever use of rough sawn lumber with simple design lines to create an outdoor garden area is seen in the illustration below of the M. C. Evans residence in Forest Grove, Ore.

nature provides on many a building lot. Improvisation is the rule.

The accent on outdoor living influences home design to a marked degree, even to dictating form of the original floor plan. For instance, when Architect Walter Gordon designed the beautiful lakeside home of Mrs. Alice Jones at Oswego, Oregon, (see page 24), he conceived a floor plan on a modified U shape which formed an automatic three walls of shelter for a lovely outdoor patio-living room. This modest home has estate elegance. Sheltered from the main-traveled road, the cement-floored patio looks out over beautiful Oswego Lake. One wall contains handy fireplace and barbecue pit. There is easy access from either living room or kitchen. A maple tree was preserved in the center of the court patio and forms a leafy roof. The stained red cedar walls blend nicely with the surrounding sylvan scene.

Architect Richard Sundeleaf has demonstrated in the F. L. Foval home in Longview, Washington how important a little advance planning can be in getting extra outdoor living space virtually without cost. (See page 23). This bonus living room patio was arranged so that two walls of the home formed two walls of the patio. Bracket lights were planned to illuminate the patio at night, and a door was so arranged in the original plans to provide easy access between patio and kitchen. The walls were designed in west coast hemlock which was finished with a loggers' oil treatment to develop a rustic tone which blended with the surrounding greenery and forested background. This is a simple but most useful outdoor room.

The Tad Luckey home in Eugene, (see page 21, top), has an ingeniously designed outdoor living room separated by a full glass wall from an adjoining dining

A sheltered deck gives a Riviera touch to the modest home of Dr. and Mrs. John Hallinan, Portland, Oregon. The wide overhang eaves designed by Architect John Storrs, establishe a year-'round family living area.

area. The red cedar drop siding of the outer walls has been extended into the home to create a fine change of pace in wall texture. A wide overhanging roof shelters the patio as does an extended wall of the home. This very livable patio was constructed for little extra cost because some careful planning was done during the preliminary stages of floor layout by Architect Paul Bogen.

A wide-roof overhang can set up many possibilities for the ingenious designer, as Architect John Storrs demonstrates in the John Hallinan home in Portland. He has used the extra wide overhang to shelter a porch made of fir decking which has a variety of interesting uses for the outdoor-minded family. (See illustration on Cover). The decking is made of two-by-fours turned edgewise with enough space for proper drainage. The porch is a popular lounging headquarters for the family and adjoins a cement-floored patio where portable barbecue equipment can serve a rather large gathering. (See page 19). This type of deck is handy where there are several children in a family for it can be kept clean merely by hosing it off. This same covered decking forms a spectacular picture when viewed from below. The extra wide eaves take on the form of a diamond back and look like a flying wing about ready to take off.

The bare minimum for an outdoor living room is a smooth, hard surface, which can be either a decking of Douglas fir or western red cedar or any variety of masonry. Cement slab, flagstones, even cross sections of treated logs serve ideally for such a floor. This minimum floor could become a rustic terrace by the addition of a few pieces of comfortable lounging furniture. Generally, however, when a person gets the patio bug, the minimum is a mere aggravation. It is surprising how very little extra will make a most presentable, under-the-stars living room.

The Phil Wertheimer family in Longview used a bit of ingenuity in developing an all-purpose living room outdoors. A brick terrace already joined the

Character of the entire yard of the Phillip Lesser home in Forest Grove, Oregon, has been changed by addition of simple patio to tie in with rough-textured beauty of a woven cedar fence.

Entire new decorative possibilities are created by use of rough wood siding in the Tad Luckey home in Eugene, Oregon, designed by Architect Paul Bagen.

BELOW . . . a cozy loafing area on this hillside home site of Phil Wertheimer, Longview, Washington, designed by Architect Keith C. Woollen.

AT LEFT—Sometimes only a fence is needed to set out the family's lounging and play area as is here shown in design of the M. R. Mitchell home in Forest Grove.

BELOW—Extra living area outdoors in the Everet Christensen home, Vancouver, Washington, has been obtained by Architect Day W. Hilbarn, by merely extending roof lines of home to join with garage, and use of breezeway screen to tie both buildings together in common line.

home on the rear, and was reached by french doors, but served not much more purpose than as a floor for a few chairs (see page 21, bottom). To get something more cozy, they had Harold Dromensk, builder, extend the brick surface with a fir decking. This was laid on a well ventilated frame and joists and space was left between the fir two-by-fours laid flat to provide for drainage. The ten-by-ten foot fir-decked patio adjoins the home on one side and blends well with the cedar drop siding. Substantial benches with backs of 2x3 dimension occupy two sides of this intimate patio. This is an ideal spot for bridge, cool drinks in the summer, games for the children or just plain loafing. It has maximum usability for minimum expense.

The lanai is becoming more popular, especially in areas of the country where inhabitants have longer summers. It is generally just a step beyond the mini-floor and oftentimes the addition of a simple louvred roof over the smooth surface suffices, as in the R. E. Mahaffey home in Portland, which will be illustrated. These interesting porch-type additions to the home can be at ground level or above. Sometimes they are merely extensions of the roof line, and this can be a louvred or shadow extension to break the full impact of the sun (see page 18, top).

Some of these lanaii or porches are merely an open-air extension of the living core, which can be closed off with sliding glass doors in the winter to serve the family the year around. Some of these interesting rooms or appurtenances to a home can be like the solarium which can be opened up with fifty percent of the glass doors slid aside to bring the outdoors right into the home, and closed up again in the winter months. This method of tying outdoors and indoors together was cleverly accomplished by Architect Clare Hamlin in the Nils Hult home out of Eugene. If insects trouble, then ventilating screens may replace the winter glass during the summer months.

Some architects like to use the free play of texture, color and form in the immediate area around the outdoor patio or living room to bring out the desired informal and pastoral air. Weather-stained cedar siding helps achieve this effect, so does a bit of driftwood in a terrace railing. Native stone or slate, or native handiwork of the region are subtle connecting links with the natural habitat or environment of each particular home. Even personal art of the owner

Two walls in the Longview, Washington, home of F. L. Foval hove been designed by Architect Richard Sundeleaf, to provide almost all that is needed in this outdoor living room.

can be applied over bare walls to create a uniquely individual room for the family.

The Robert E. Nye hillside home in Eugene has two separate outdoor living areas created by Architect Norris M. Gaddis, which mark this home as distinctively a part of its environment. A lounging deck, (see page 17), with a panoramic view of the surrounding valley and hills, hangs from the downhill side of this intriguing small home. Beneath the open area another lounging area has been built in primitive simplicity. The simply enclosed patio deck, high above the next lower street level, affords privacy for the owners. This decking is also of Douglas fir two-by-fours laid flat and spacing has been left for drainage. The deck is four steps below the floor level of the home so view from the windows facing the valley will not be impaired. Made of native fir it blends into the wooded hillside where the home has been so carefully designed to fit its site.

Natural materials can be used to link the outdoor living room to its immediate environment. Rough sawn boards that have been allowed to weather to natural grays and browns, especially if the woods are native to the region, make the ideal link when used in fences, shelters, roofs or sun shades. Redwood and western red cedar seem to lend themselves particularly to these casual areas and to a similar degree the firs and hemlocks of the west coast find many uses. Some most interesting work has been done with native slate and stone slabs in floors, walkways and even in more elaborate installations around barbecue pits and outdoor fireplaces. The secret is to get that casual air of simple natural appeal.

At Forest Grove, Oregon, the Phillip Lesser family used rough sawn cedar boards most effectively to create a complete outdoor living theme in their spacious back yard. (See page 20). Using low grades of one by eight inch cedar boards they built an estate-

By careful planning this outdoor living room serves the residence of Mrs. Alice Jones, Oswego, Oregon, as an extra area. Walter Gordon was the architect.

type fence with a basketweave pattern, capped with a protecting 2x4 cedar railing. Confirmed flower lovers, they built a sunshade of the same material, separating the louvred roof members by the width of the boards. This is simply framed and around its supporting corner posts shelving has been built of cedar to provide display of potted plants. Carrying the cedar theme even further, they have built a number of cedar tubs for larger plants and flowers and arranged these about the flower patio. The effect of this simple patio in setting the theme for this modest yard and grounds is most pleasing.

In a neighboring Forest Grove yard, the M. C. Evans family has developed an ordinary outdoor area into a thing of striking beauty, and the key to this improvement was planning and not cost. The Evans used an estate type fence similar to the Lesser fence and built it of lower grades of lumber (see page 18, bottom). This family leans more to gardening, and to provide a sheltered area for potting bench, and tool storage, they devised a gardener's hideaway in one corner of their fenced-in yard. The walls of the hideaway are made of a woven pattern identical with the fence. A low gently sloping roof combines to provide an almost unnoticed building which blends perfectly with the fence line. Lawn furniture as well as hose, lawn mower and other garden tools can be kept out of sight here when not in use. Another feature of this simple rustic outdoor setting is the treatment of the outdoor clothesline. The clotheslines stretch between two wooden screens built up from one inch-wide fir slats crisscrossed. A pipe forms the top anchor for the lines. Flowers of climbing varieties have been planted on the outside. The clothesline is thus partially hidden from the rest of the garden.

Some designers and landscape people have come up with some especially effective outdoor livings areas by the simple expedient of building the proper fence to provide reasonable seclusion for the family. Constant changing arrangement of portable lawn furniture behind this sheltered screen takes care of the needs of the family at the moment. There has been considerable experimenting with various patterns of wooden fencing, and one of the most popular is the woven fence. This is easy to build, in fact, M. R. Mitchell with the assistance of his wife, built a particularly attractive one surrounding his fine Forest Grove home. Using number four fir lumber, the cost of a woven fence five feet high around three sides of a 100 by 100 foot lot cost less than $100 (see page 22, top).

Architect Day W. Hilborn of Vancouver, Washington has developed a most intriguing outdoor living

(See page 33)

Narrow spot wall area in the William Vernon home has been utilized by Architect DeWitt C. Robinson for a cozy lounging and relaxing spot.

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Architects of the Pacific Northwest states indicate a large number will attend this year's conference.

PASADENA CHAPTER

Architect Lee Kline was the principal speaker at the August meeting, taking as his subject "Practice Fees," and architect Kenneth Nishimoto of the firm of Taylor, Warren, Nishimoto & Conner gave a summary of his recent trip to Tokyo together with numerous color slides.

The Chapter has been invited to put on a 15-minute skit at the California Council of Architects convention in Santa Barbara on Thursday, Oct. 6th.

NEW MEMBERS — Vincent Proby, and Alexander Davis, Associates.

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Producers' Council — Northern California Chapter (See Special Page)

a week-long "Design at Home" show to be presented September 18-25 at Villa Montalvo, world famous art center in Saratoga.

Three types of design will be presented in the exhibit: Models and Drawings of architect-designed homes: garden plans by landscape architects: and Furniture and Home accessories, including ceramics, textiles, sculpture, plastics, metal crafts, wood pieces, mobiles and jewelry.

Purpose of the exhibit is to present designs created by San Francisco Bay Area artists which illustrate simplicity, efficiency, and the careful use of material and color, and also to prove that good design may be found at prices to fit nearly every pocketbook.

NORTHERN CALIFORNIA CHAPTER

Henry L. Wright, president California Council of Architects recently discussed three current projects being undertaken by the Council.

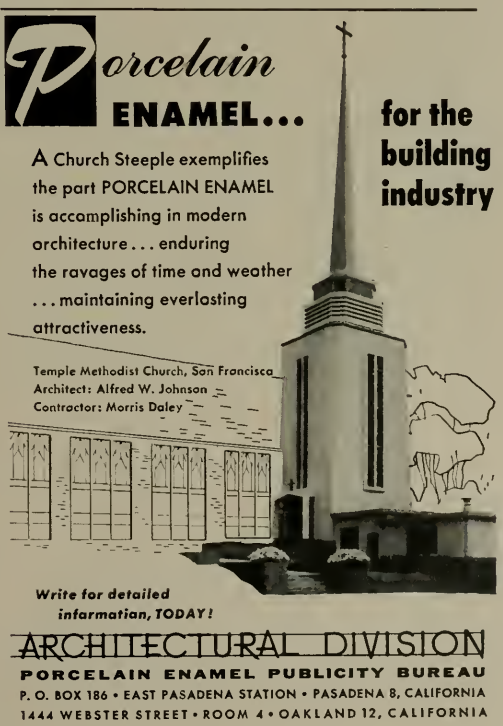
Projects are: Revision of the Recommended Schedule of Fees, which will include a summary of architect's services; Errors and Omissions insurance for architects; and a quarterly magazine which will be directed to the general public.

Melton Ferris, executive director of the Council reported that not a single bill favorable to the architects passed the California legislature this year, despite a unified effort on the part of the Council members.

CALIFORNIA COUNCIL OF ARCHITECTS

The Santa Barbara Biltmore Hotel will be headquarters for the 10th Annual Convention of the California Council, scheduled for October 6-8, in Santa Barbara.

(See page 32)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CONVENTION COMMITTEEMEN—Meeting in San Francisco recently in conjunction with the annual convention were: left to right standing—Ted Newman, General Chairman; Byron Nishkian, Technical Chairman; seated—G. Arthur Sedgwick, SEAC President; William Dreusike, Social Chairman; and Al Perry, Attendance and Registration.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA — CONVENTION

At a recent meeting in San Francisco the Convention Committee for the 24th Annual Convention of the SEAC, to be held in Yosemite National Park, October 6-8, announced a tentative program of subjects and speakers which included the following:

Charles S. Whitney, consulting engineer with Ammann & Whitney of New York and Milwaukee will discuss "Thin Shell Roof Structures"; Jacob Feld, consulting engineer of New York City will speak on "Engineering Failures"; Professor Perry Byerly of the University of California will talk on "Recent Developments in Engineering Seismology"; Professor Lynn Beedle of Lehigh University will discuss "Development of Plastic Design in Structural Steel," and Commander Harry N. Wallin, Bureau of Yards and Docks, USN, wil speak on "Maintenance Considerations in Original Designs."

Entertainment plans include a Costume Ball, an Amateur Night, and the closing night Banquet and Dance.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"The Application of Special Rolled Shapes to

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

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American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Structural Use" was the subject of a panel discussion at the August meeting in the Engineers' Club, San Francisco.

Speakers taking part in the program were: F. Robert Preece, District Engineer for Bethlehem Pacific Steel Corporation; Frank A. Norton, Manager Commercial Research, Bethlehem Pacific Steel Corporation; and Don B. Hicks, Sales Manager of the Kaiser Steel Corporation.

The history of steel and iron in the building trades was covered by the discussion as well as introduction of new "shapes," design, detailing and fabrication, roll design costs, rolling and finishing operations. Model displays and pictures supplemented the discussions.

Announcement was made that the September meeting would be a joint meeting with the East Bay Structural Engineers Society, September 6th in the Athens Club, Oakland. Professors Clough and Rafael of the University of California will be the principal speakers.

FEMINEERS

The Femineers held their August meeting at the home of Mrs. C. J. Lindgren in Sonoma, California, on the 17th, enjoying a program of swimming and cards.

SOCIETY OF AMERICAN MILITARY ENGINEERS — San Francisco Section

Henry K. Norton, Chairman of the Board, New York, Susquehanna and Western Railroad Company was the principal speaker at the August meeting held in the Presidio Officers Club, San Francisco.

Norton spoke on the subject "Overhead Rapid Transit for the Bay Area."

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

The American Society of Mechanical Engineers' Diamond Jubilee Annual Meeting has been scheduled for Chicago from November 13-18.

Special features commemorating ASME's 75th anniversary have been planned for the six day event according to Society officials.

More than 300 technical papers are scheduled for discussion at 110 sessions covering a variety of subjects including aviation, applied mechanics, manage-

(See page 31)

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PRODUCER'S COUNCIL PAGE

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Edited by Robert W. Harrington, **Clay Brick and Tile Association**, 55 New Montgomery Street

CONFERENCE ON SPEAKERS MATERIAL

John C. Cowley, president, San Francisco Chapter Producers' Council (l); G. F. Loughman, San Francisco District Sales Manager for Libby Owens Ford Glass Co.; and Wayne Hertzka, president San Francisco Chapter AIA, confer on program subjects at recent meeting.

AUGUST INFORMATION MEETING

The August program presented by the California Redwood Association presented two interesting sidelights of California redwood and its conservation. Mr. Carney J. Campion, Redwood Region, Conservation Council, 576 Sacramento Street, San Francisco, told of the reforestation program, which according to Mr. Campion will keep a constant supply of redwood flowing at today's rate to the building market.

The second half of the program presented by Mr. Larry Lowell, California Redwood Association, described for the architects and the council, the various types of redwood, where they should be used, and how they should be used to be the most economical and practical. The program presented by Mr. Lowell was illustrated with 35 mm color slides.

A distinguished council member and guest of the San Francisco Chapter of Producers' Council for the August meeting was Mr. Henry North, President Arcadia Metal Products, Los Angeles, and West Coast Director of National Producers' Council.

JULY MEETING

G. F. Loughman, San Francisco District Sales Manager, Libby Owens Ford Glass Company, was the principal speaker and showed a motion picture film "The Perfect Parallel," which told the story of glass and the new type of plate glass which now is so perfectly ground that it is used in military airplanes, in bullet-proof glass, and can be had in large plates for window display and will eliminate the major portion of the distortion which presently is so distracting in window glass, mirrors, etc.

There were approximately 92 architects, members of Producers' Council, and guests present at the meeting. John Cowley, new President, was in charge of the introduction of the new officers and committee chairmen, and conducted the entire meeting. Phil Brown, Chairman of the Program Committee, introduced Mr. Loughman and Mr. Loughman in turn presented his program for the Producers' Council group.

ENGINEERS—

(From page 29)

ment, materials handling, oil and gas power, fuels, safety, hydraulics, metals engineering, heat transfer, process industries, production engineering, machine design, petroleum, nuclear engineering, railroad, power, textile, gas turbine power, wood industries, rubber and plastics and instruments and regulators.

The Chicago Section of the ASME will host the convention, and at the special Honors Luncheon, five major joint engineering awards will be conferred.

Charles F. Kettering will receive the Hoover Medal; John Fritz Medal will be awarded to Philip Sporn; the Elmer A. Sperry Award to William F. Gibbs; the Henry L. Gantt Memorial Medal to Walter L. Cisler, and the Daniel Guggenheim Medal will be awarded to an individual to be announced later.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Two-hundred and ten members of the SEAOSC descended on Oakmont Country Club, August 5th, for their annual field day consisting of golf, baseball, dinner and floor show.

Golfers at the SEAOSC pause for a brief rest (left to right) Bill Keener, Chairman Field Day Committee in charge of Golf; Gene Lux; Bill Kuyper, Chairman of the Field Day Committee; Joe McVeigh; Bob Wallace; Lucien Sadecki, and Rupert Brittain.

Allen Spencer won the perpetual golf trophy. G. Wright and J. Hoggart tied for low net, and J. G. Middleton and Don Wiltse tied for low gross. The baseball game ended in a tie with the Civil Service and Private Practice teams calling a halt to proceedings at the beginning of the seventh inning.

New members include: Walter A. Brugger, Associate; Thomas L. Cook, Junior; Greer W. Ferver, Robert H. McAllister, William D. Myers, and Kendall R. Peck, Affiliate; Lawrence J. Hutchinson, Per L. Kramp, and Samuel Schultz, Member.

PICTURE CREDITS—Photo Art Commercial Studios, Cover, Page 18 (top), 21 (bottom); deYoung Memorial Museum, Page 4, 5; John S. Bolles, AIA Architect, Page 7; Morgan H. Hartford, AIA Architect, Page 8, 9; Hainlin Studio, Page 10, 11, 12, 13, 14, 15,16; Tom Burns, Jr., Photographs, Page 17; West Coast Lumbermen's Ass'n, Page 18 (bottom), 19, 20, 21 (top), 22 (top), 23, 24, 25; Leif L. Nielsen, Architect, Page 3; Clay Brick & Tile Ass'n, Page 30.

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PERSONALITIES

ROBERT B. LILES Architect
San Francisco, California

Born in Colorado Springs, Colorado, in 1909, "Bob" Liles attended Colorado College for two years before transferring to the University of California, Berkeley, in 1929, receiving his degree of A.B. in 1932 and M.A. in 1934.

ROBERT B. LILES
Architect

After graduation he spent twelve years in air conditioning and electrical work involving design, installation and maintenance. Leaving the position of Chief of the Electrical Section, Engineering Department, of United Engineering, Ltd., Alameda, at the close of World War II, Liles accepted a position in the office of Corlett and Anderson, Architects and Engineers, Oakland, and during his service there received his Certificate as an architect. Subsequently he directed the Architectural and Engineering Division of Leo Roselyn Co., San Francisco, and then opened offices for the practice of architecture in San Francisco.

Among work completed is Cooper's Department Store, Fresno; Broadway Shopping Center, Walnut Creek; department stores in Chico, Eureka, Tracy and other locations for the J. C. Penney Co.; warehouse, wholesale bakery, banks, medical buildings and miscellaneous shops. Unfinished work includes department stores in Monrovia, Berkeley and Sacramento for Penney Company, three shopping centers, several banks and a church.

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A.I.A. ACTIVITIES

(From page 27)

Preliminary plans include discussion of major professional activities vitally affecting California architects; a forum on "Should Architects Advertise" with Cornelius Deasy, moderator; cocktail party; seminars and the Producers Council annual sports program.

Speakers will include George Bain Cummings, A.I.A. president, and national officers.

SOUTHERN CALIFORNIA CHAPTER

Plans are underway for publication of a historical Guide to contemporary architecture in Southern California, to be used in conjunction with the 1956 national convention of the American Institute of Architects which is scheduled to be held in Los Angeles.

Examples of the work of practicing architects of Southern California is to be included in the Guide, and members of the A.I.A. are invited to submit material for publication consideration.

COAST VALLEYS CHAPTER

Henry L. Wright, president of the California Council of Architects was the principal speaker at the August meeting held in the De Anza Hotel, San Jose. Also in attendance and discussing national AIA projects was Donald Beach Kirby, architect, and Sierra-Nevada District director.

Attention was called to the A.I.A.-W.A.L. "Design at Home" exhibition which will be shown at Montalvo, September 17-25, Saratoga.

EARL W. HAMPTON APPOINTED ASSISTANT STATE ARCHITECT

Earl W. Hampton of the California State Division of Architecture has been appointed Assistant State Architect, according to an announcement by Anson Boyd, State Architect.

Hampton will have administrative responsibility

for fiscal and budgetary matters pertaining to the Division of Architecture, and will administer and manage all construction contracts, supervise divisional cost controls and operating budgets, and administer and maintain cost controls of construction budgets.

AMERICAN INSTITUTE OF ARCHITECTS ENTERTAIN

The American Institute of Architects was host recently to a gathering of government officials to view the designs prepared by Hugh Stubbins, Jr., of Lexington, Massachusetts, for an international conference hall to be erected in the western sector of Berlin.

AIA president George Bain Cummings, welcomed the group.

The permanent conference building will be available to the German city as a result of the AIA's cooperation with the United States Government in its program in support of Berlin.

FOWLER APPOINTED PROMOTION DIRECTOR DOUGLAS FIR PLYWOOD

James F. Fowler has been appointed to the newly created position of director of promotion for the promotion effort on behalf of western fir plywood manufacturers, and will supervise and coordinate enlarged activities of five key departments in association work including advertising, Douglas Fir Plywood Association, according to an announcement by W. E. Difford, managing director of the plywood industry's trade group.

JAMES F. FOWLER
DFPA

Fowler will head a vastly expanded publicity, merchandising, field promotion and allied products.

Difford also announced that John D. Ritchie will become director of media and advertising, and Thomas C. Sias director of publicity.

Howard B. Garrison, vice president and general manager of the Evans Products Company, western division, Coos Bay, Oregon, was elected president of the Douglas Fir Plywood Association at its 50th Annual Convention in Portland, Oregon, the latter part of June. He succeeded Eberly Thompson of Portland.

Other officers selected to serve with Garrison include A. W. Agnew, vice president Pacific Coast Company, Sonoma, California, vice president; Monford Orloff, general manager of Mt. Baker Plywood, Inc., Bellingham, Washington, secretary; C. Henry Bacon, Jr., vice president and general manager Simpson Logging Company, Shelton, Washington, treasurer; and trustees Martin N. Deggeller, Harbor Plywood Corp., Aberdeen, Washington; Fay L. Foval, Long Bell Lumber Co., Longview, Washington; Corydon Wagner, Sr., St. Paul & Tacoma Lumber Co., Tacoma, Washington; and Robert N. Kelly, M & M Wood Working Company, Portland.

OUTDOOR LIVING . . . WEST

(From page 25)

space for the Ernest Christensen family by the simple process of tying garage and home together with a continuing roof structure to provide a sheltered covered area. A low screening fence of cedar drop siding to match the home masks off the breezeway from the street side and gives the family an extra storage space for furniture and even a play area on the cement floor when weather is bad (see page 22, bottom). This bonus space opens onto a back garden. A swinging gate in the breezeway screen gives access from the

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street side and adds charm to this often neglected part of home design.

Siesta decks, tiny sheltered lounging areas, simple patios affording protection from the hot noonday sun, or privacy from eyes of neighbors and passersby is mighty easy to acquire and many an architect or designer has surprised his client with unexpected bonus loafing areas. Architect DeWitt C. Robinson had a narrow four foot walk area running alongside the home of William Vernon between driveway and the side of the house. The area was already sheltered because he had designed extra wide eaves to keep rain and sun off people alighting from cars or coming in from the adjoining carport. To get privacy from the street, he ran a solid framed wall along the line between driveway and covered sidewalk (see page 25). The wall was four feet high, left ample space for egress to home entrance. Result, a cozy spot large enough for several chairs or even a bridge game setup.

Where land space does not permit even the smallest outdoor buildings, some architects like Thomas Stafford of Eugene, Oregon, have used the outer walls of the home to provide the frame for such a wide variety of installations as tool sheds, potting tables, tip-up dining tables, storage walls for games, utensils and even refreshment bars. Other space savers are outdoor fireplaces, barbecue pits and Swedish fireplaces built into the brick frame of the home's principal chimney.

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ARCHITECT & ENGINEER
MAGAZINE

68 Post Street **San Francisco**

In tiny, space-premium courtyards in the city, some designers have done remarkable work in developing wall display areas for potted flowers, and in compacting benches along walls to get maximum use of space.

Some architects are giving consideration to moving some of the more popular home entertainment outdoors without causing too much upheaval in this transition. Where practical, television sets are being installed that may be turned on a swivel to be seen either in the patio living room or in the adjoining room indoors. A simple, weather-tight door slides down when the set is not needed for the outdoor fans. Some architects provide outdoor convenience outlets for both electricity and radio aerials and some even provide a remote control panel and speaker which gives the outdoor hi-fi fan real pleasure with his leisure.

This urge to move outdoors and live in the open is no passing fancy, and there are those in the design and architectural professions who claim the contemporary home of the future will be built around the outdoor living areas, with the home as a shelter when the family can't live with the weather. This may not be as unreal and impractical as it sounds. Development of plastic walls and roofs which can be installed over simple frames with ease, and extensive possibilities for carrying heat to these outdoor areas will certainly lengthen the months for use for these newfound wonder spots. The possibilities of the greenhouse type of living room, the all-weather solarium and the louvred roofs that are moved into position automatically by electric-eye magic when light or heat factors fall below certain norms, are not to be discounted for the future.

Stored sunheat or amazing atomic heat may not draw disdainful shrugs a decade or two hence, and they are but two of a whole galaxy of wonderful new inventions coming from the research laboratories of big industry, yet they point the way to the infinite opportunities for better living in the future. Certainly better living must be built around the home, a better home, and outdoor living is becoming more and more important to a healthy family.

NUCLEAR AUTHORITIES PLAN "ATOMS FOR PEACE" MEET

U. S. and foreign engineers, scientists and industrial representatives from twenty-four business and technical societies, sixteen universities, thirteen government bureaus and AEC contractors, and thirty-four major U. S. industrial corporations will present some 300 papers in fifty sessions in one week covering practically every phase of peacetime uses of atomic energy and its by-products at a Nuclear Engineering and Science Congress to be held in Cleveland, December 12-16, according to Thorndike Saville, Dean of the College of Engineering, New York University and President of the Engineers Joint Council.

STRUCTURAL ENGINEERING FIRM IS ORGANIZED

Announcement has been made of the organization of the structural engineering firm of Carter & Slattery, Structural Engineers, with general headquarters at 587-B Hartnell, Monterey, California.

The new firm is comprised of Howard G. Carter and Fremont W. Slattery, Jr.

NEW HOME OFFICE

The Fireman's Fund Insurance Company of San Francisco, recently applied for a building permit to provide for construction of a three story, 190,000 sq. ft. Home Office building to be erected in San Francisco on the corner of California, Laurel and Euclid streets.

The building will be of Class 1-B, and will cost an estimated $2,400,000. Edward B. Page, San Francisco, is the architect.

MEMORIAL HOSPITAL

Architect Gerald Matson of Eureka (California) has completed drawings for construction of the Redwood Memorial Hospital building to be erected in Fortuna by the Redwood Hospital Association.

ARCHITECT SELECTED

The architectural firm of Kaestner & Kaestner of Modesto has been selected by the Modesto Unified School District to draft plans and specifications for construction of a Music and Arts building at the Modesto Junior College.

The school district also selected architect Harry J. Devine of Sacramento as the supervising architect.

POST OFFICE SIGNS FIRST LEASE-PURCHASE

Postmaster General Arthur E. Summerfield has signed the first architectural engineering contract under the P. O. Department's "lease-purchase" program.

The firm of Van Storch, Evans, Scandale and Burkavage, architects with offices in Scranton, Pa., will prepare working drawings and specifications for the construction of the new Dunsmore Branch Station of the Scranton, Pa. Post Office. Under the program passed by the 83rd Congress the P. O. Department will buy modern and needed facilities on periodic payments like rent.

STADIUM-TYPE AUDITORIUM

Architect C. B. Alford and W. J. Thomas, Associate of Bakersfield are completing plans for construction of a stadium-type auditorium at the North-of-the-River High School in Oildale, for the Kern County Union High School District.

The building will contain 13,000 sq. ft. of floor area and will be of reinforced concrete construction. Estimated cost is $319,280.

STEEL WORKERS AUDITORIUM

Architect Herman O. Ruhnau of Riverside is completing plans for construction of an auditorium of 1000 seating capacity for the United Steel Workers of America.

Estimated cost of the auditorium is $175,000.

RECREATION BLDG. AND CITY HALL

The Redondo Beach City Council recently approved a lease-purchase agreement for the construction of a new City Hall and recreation facilities in Redondo Beach.

The Wachob-Bender Corpn and Robert E. Schweser and Co, both of Omaha, Nebraska, will construct the buildings.

VETERANS OF FOREIGN WARS PROTEST AIR COLLEGE DESIGN

Letters protesting the design of the national Air Academy, under construction near Colorado Springs, Colorado, as an "insult to our American heritage" were recently sent to Secretary of the Air Harold Talbott, members of Congress and President Eisenhower by officials of the Veterans of Foreign Wars of the U. S.

VFW Commander-in-Chief Merton B. Tice labeled the design of the school which will cost $126,000,000 to construct, as "experimental architecture more suitable for a supermarket or a factory than for a service academy where the flower of young American manhood will be trained to represent the highest traditions of the Armed Forces of the United States."

SAN FRANCISCO FLOWER MART

Architect Mario Ciampi of San Francisco is completing drawings for construction of the new $1,000,000 Flower Mart building which is to be constructed at 6th & Brannan streets in San Francisco and will replace present Mart facilities at 5th and Howard streets.

Construction will consist of a 1-story reinforced concrete tilt-up building with wood roof, containing a restaurant and cocktail lounge and 165,000 sq. ft. of overall floor area.

Over the years, architects, engineers, school authorities and contractors have come to agree that when sources of public drinking water must meet particularly rigid standards of sanitation, mechanical excellence and design, the ideal specification is HAWS! That's why the name "HAWS" is so often found on drinking fountains used in public schools—where equipment must be *extremely* rugged, *thoroughly* dependable, *completely* sanitary. *Always specify* HAWS!

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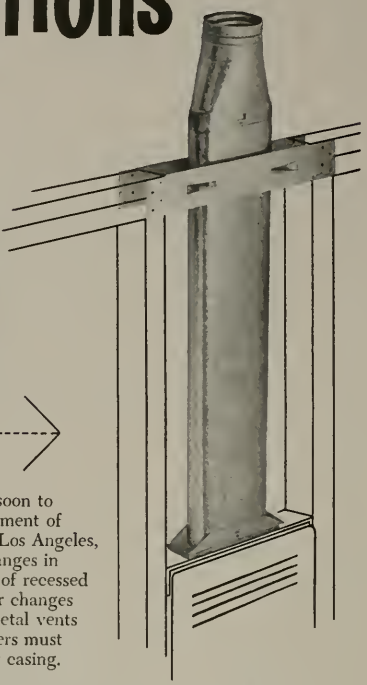
New Los Angeles regulations

to require galvanized steel casing for recessed heater vents



In recent recommendations, soon to become effective, the Department of Building and Safety, City of Los Angeles, has specified a number of changes in the requirements for venting of recessed gas heaters. One of the major changes stipulates that double-wall metal vents used with recessed wall heaters must have a galvanized steel outer casing.

Illustrated above is the Metalbestos Wall Heater Vent. This Type B-W vent complies fully with new Los Angeles vent requirements for recessed heaters.

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MUNICIPAL BONDS FOR CONSTRUCTION

Voters of Humboldt county, California, recently approved issuance and sale of $3,000,000 worth of bonds with funds to be used for construction of a new County Courthouse and Jail.

The county board of supervisors also commissioned the architectural firm of Russell G. deLappe & Mitchell Van Bourg of Berkeley and Gerald Matson of Eureka, to draft plans and specifications for construction of the building.

KRAFTILE COMPANY EFFECTS ECONOMIES

Kraftile Company's plant modernization program, although not yet completed, has already made possible economies which are reflected in current prices of its Glazed Structural Units, according to C. W. Kraft, president of the firm.

The company's present quotations and costs on wall tile units are at a level 20% below that of 1935, despite the fact that during that period the basic hourly wage rate has increased 342½ per cent.

Kraft attributes part of the cost reduction to increased sales volume which has gained more than 7½ times in the past twenty years.

LIGON ELECTED HEAD OF CLAY PIPE GROUP

Elmer R. Ligon, Director of Research for the W. S. Dickey Clay Pipe Mfg. Co., Pittsburg, Kansas, has been elected President of the National Clay Pipe Research Corp., an organization of the vitrified clay pipe industry.

Other officers and trustees elected include: Roderic Antrim, Chief Sales Engineer, Pacific Clay Products Co., Los Angeles, vice president; J. W. McClave, Assistant Secretary, Peerless Clay Corp., Toronto, Ohio, Secretary; James Millekan, superintendent, Pomona Terra Cotta Co., Greensboro, North Carolina, Treasurer.

AMERICAN CONCRETE INSTITUTE MEETING

The American Concrete Institute's Southeast Regional Meeting will be held Oct. 31-Nov. 1, at the Atlanta Biltmore Hotel, Atlanta, Ga.

William H. Armstrong, structural engineer, and William R. Ireland, will co-chairman meetings discussing thin-shell precast concrete, silicone water repellents for masonry, lightweight aggregate concrete, and other technical subjects dealing with uses of concrete.

U. S. ENGINEERS WILL DREDGE HUMBOLDT BAY

The dredge "Biddle," the largest hopper dredge on the west coast, will arrive in Humboldt Bay, Eureka, this month from Portland, Oregon.

Colonel J. A. Graf, San Francisco District Engineer, Army Engineers, reports the dredge will accomplish the required maintenance dredging of Humboldt Bay and following a month and a half at Humboldt, will arrive in San Francisco Bay about January 1.

LEONARD A. KOMOR APPOINTED ENGINEER

Leonard A. Komor, Oakland, has been appointed district sales engineer for Northern California for Sylvania Electric Products, Inc., according to an announcement by company officials.

A native of Shanghai, Komor is a graduate of the school of engineering, University of California, and a veteran of the U. S. Air Force.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

LIFT SLAB ENGINEERING MANUAL. U. S. Lift Slab Corp'n, Austin, Texas. Price $5.00.

Prepared for use by Architects and Structural Engineers giving in many details the Youtz-Slick LIFT SLAB method of construction; a process for vertical positioning of massive objects. The lifting is done with hydraulic jacks placed on either permanent or temporary columns. Purpose of the method is to produce buildings more efficiently, safely, economically, and better than built-in-place construction will allow.

Widespread adoption of the Youtz-Slick LIFT SLAB method of construction has brought about structural problems inherent to the revolutionary aspects of the Method. Solutions to particular situations have been offered and constant study of basic structural features is being pursued . . . this Manual is a summation of the coordinated efforts of the U. S. Lift Slab Corp'n and will be supplemented from time to time.

MUSIC—Buildings, Rooms, Equipment. Music Education Research Council, 64 E. Jackson Blvd., Chicago 4, Ill. Price $4.50.

A revision of Music Education Research Council Bulletin No. 17 prepared by the 1952-54 Committee on Music Rooms and Equipment and published by the Music Educators National Conference, a department of the National Education Association of the United States.

In loose-leaf form, edition provides for revisions and additions; contains many photographs, drawings, charts and plans.

THE BOMB SURVIVAL AND YOU—Technical Supplement. By Fred N. Severud and Kurt Bernhard, Ph.D. Reinhold Publishing Co., 430 Park Avenue, New York 22. Price $2.50.

This book features the effect of blast loadings as subjected to a mathematical analysis. The speed of loading due to a blast is of a tremendous magnitude, since such a loading increases to a maximum almost instantaneously. Another basic difference between standard design and blast-proof design is that for the former we can afford to keep the member crackless; for the latter we can not. These are new concepts in building design and if carried through must be done by a skilled engineer with mathematical clearness.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

School Sound Systems. 8-Page booklet describes how modern schools can utilize sound to achieve easier administration and more effective teaching; non technical terms, many illustrations; benefit of sound for principals, teachers, and students are described. Copy free write DEPT-A&E, Engineering Products Division, Radio Corpn of America, Camden, N. J.

Tree Life Hemlock characteristics and properties. New brochure giving details of versatility of Tree Life Hemlock; dimension and structural, boards and shiplap, siding and exterior trim, interior finish, and grade use guide; many illustrations and drawings. Copy free write DEPT-A&E, St. Paul & Tacoma Lumber Co, Tacoma 2, Washington.

What the Architect hides. New 20-page illustrated booklet shows through series of scratch-board drawings types of equipment architects normally build-in—telephones, electrical wiring, air conditioning, heating. Free copy write DEPT-A&E, Engineering Products Division, Radio Corpn of America, Camden, N. J.

Safety devices for hot water space heating boilers. New booklet is an authorative discussion, with many illustrations, on basic safety controls. Illustrations are all drawings with accompanying captions and detail to show varying operating

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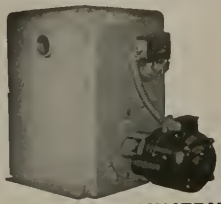

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conditions that can be encountered; includes specific service recommendations on pressure relief valves, low water cut-offs, boiler water feeders, and feed cut-off combinations. Free copy, write DEPT-A&E, McDonnel & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

Corrosion Control. New booklet tells how Zinc controls corrosion; 32 pages, illustrated, describes many ways zinc lengthens life of steel products and reduces maintenance cost; drawings, charts, and photographs together with brief comments present corrosion control characteristics of zinc coatings, zinc pigments, and zinc anodes; applications for farm, industrial, marine and building uses. Copy available write DEPT-A&E, American Zinc Institute, Inc., 60 E. 42nd St., New York, N. Y.

Air conditioning units. New 20-page catalog describes line of central-station, cabinet-type air conditioning units; illustrated, describes three types of air conditioning units for industrial and commercial application; ten pages devoted to tables and graphs that enable heating and ventilating engineers and contractors to determine exact type of unit which will meet individual job; specifications. Free copy write DEPT-A&E, American Blower Corpn, Detroit 32, Mich.

Architects Manual for Venetian Blinds. New enlarged edition of the Architects Manual for Venetian Blinds in blueprint format; identifies parts, explains functions and gives detailed directions on how to handle special installation problems; diagrams show everhead pockets, blinds fitted around air conditioning units, pivot clearance installations, manual remote control, and oscillating rollers; chart gives area, weight and pull for blinds of various dimensions. Free copy write DEPT-A&E, Levolar Lorentzen Inc., 720 Monroe St., Hoboken, N.J.

Rolling Gymstands. New catalog illustrates and describes design and construction features of this functional, efficient gymnasium seating line; contains important data on economics of indoor seating, factors to consider in selecting, available variations from standard models, accessories, planning aids and architectural specifications; of interest to architects, school superintendents and officials. Free copy available write DEPT-A&E, Wayne Iron Works, Wayne, Pa.

Acoustical suspension. New brochure (A.I.A. File 39-B1) describes Accesso acoustical suspension systems and their flexibility that permits moving lights and other ceiling fixtures in acoustical tile ceilings one module or a dozen in just a matter of minutes; gives design details, installation data, and general information of interest to architects, engineers, contractors, and builders. Free copy write DEPT-A&E Accesso Systems, Inc., 4615 8th Ave. N. W., Seattle 7, Washington.

Protection from smog. A new booklet published by the Connor Engineering Corpn, recommends a "well engineered air distribution system, adequate removal of coarse particles and fine aerosol mists, and activated carbon filtration to eliminate all gaseous and vaporous impurities from intake air," to safeguard occupants of buildings from the hazards and irritations of smog. Write DEPT-A&E, Connor Engineering Corpn, Danburry, Conn. for copy of booklet.

Ballasts for fluorescent lamps. 8-Page catalog in color describes complete line of ballasts for fluorescent lamps for residential, commercial and industrial use; offers a guide to basic data on ballasts for application and design; also presents many drawings and photographs of various installations. For copy write DEPT-A&E, Universal Mfg. Corp., 11 Hill Street, Newark 2, N. J.

Electrical System Planning for the School Building. New booklet prepared by R. A. Zimmerman of the electric utility engineering department of Westinghouse Electric Corpn; is an engineering analysis and contains great amount of valuable data. Copy available write DEPT-A&E, Westinghouse Electric Corpn, 3 Gateway Center, Pittsburgh 30, Pa.

Masonry blades. Catalog describes new and complete line of masonry blades in color; includes blade types and sizes, applications, a comparative grade chart, description of blade identification system, and other information. Free copy write DEPT-A&E, Carborundum Co, Niagra Falls, N. Y.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull brass plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Meduse White, Calaveras White ..... 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.62

Aggregates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd $7.75
⅜-inch to ¼-inch, per cu. yd 7.75
No. 6 to 0-inch, per cu. yd 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concreta waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shoval work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—	¾x2¼	½x2	⅜x2	⅜x2
	$	$	$	$
Clear Otd., White	425	405		
Clear Otd., Red		380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390 00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
76 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅜") ..... $95.50 per M sq. ft.
Siselation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpantry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE, CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 920 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tucson, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (Composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
YERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
MAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

HIGH SCHOOL, Elwood P. Cubberly High School, Palo Alto, Santa Clara county. Palo Alto Unified High School District, Palo Alto, owner. 16-units of frame and stucco construction, some steel; administration, classrooms, gymnasium, shops, toilet rooms—$1,687,620. ARCHITECT: Clark & Stromquist, Palo Alto. GENERAL CONTRACTOR: Howard J. White, Inc., Palo Alto.

MEDICAL BLDG, Vallejo, Solano county. Raymond Syufy, Vallejo, owner. 1-Story frame and stucco construction; 6,500 sq. ft. floor area, facilities for eight suites of offices—$90,000. ARCHITECT: Vincent G. Raney, San Francisco. GENERAL CONTRACTOR: Toofe Essy & Val-Nap Builders, Vallejo.

OFFICE BLDG., Reno, Nevada. Washoe Title Insurance Company, Reno, owner. Remodel present office facilities, interior and exterior — $100,000. ARCHITECT: Ferris & Erskine, Reno. GENERAL CONTRACTOR: Frank Capriotti, Reno.

ARCHITECTURE BLDG., University of California, Berkeley, Alameda county. University of California, Berkeley, owner. Project comprises alterations to the Architecture Building — $19,589. GENERAL CONTRACTOR: Herbert E. Ellis Construction, Berkeley.

CHURCH ADDITION, Alameda, First Church of Christ Scientist, Alameda, owner. Construction of a 1-story addition to present church structure; concrete block and frame; 17x28 ft.—$15,868. ARCHITECT: Andrew T. Haas. GENERAL CONTRACTOR: C. W. Luth, Oakland.

LINDSAY MEMORIAL BLDG., Lindsay, Tulare county. Lindsay-Strathmore Memorial District, Lindsay, owner. The project consists of construction of an addition and remodel of the present Memorial building—$38,271. ARCHITECT: Robert C. Kaestner, Visalia. GENERAL CONTRACTOR: R. Hodgson & Son, Porterville.

OFFICE & WAREHOUSE, Burlingame, San Mateo county. Adolph Blaich, Inc, San Francisco, owner. 1-Story reinforced concrete tilt-up construction: wood roof and trusses, 28,600 sq .ft. floor area; office building, frame consthuction—$140,000. ARCHITECT: John C. Warnecke, San Francisco. GENERAL CONTRACTOR: Haas & Haynie, San Francisco.

AUTO LAUNDRY, Lynwood, Los Angeles county. J. B. Poor, Lynwood, owner. 1-Story concrete block, composition and rock roofing, pipe columns, plate glass, concrete slab floors, cafe room with acous-

tical ceiling, lockers, storage rooms; 42x85 ft. ARCHITECTS: and ENGINEERS: Caldwell, Mason & Muntz, South Gate. GENERAL CONTRACTOR: A & M Constn Co, Paramount.

APT-HOTEL, Los Angeles. Barsel Constn Co, Los Angeles, owners. 2-Story, 25-unit, frame and stucco apartment hotel; 79x98 ft.; composition and gravel roof, carpet, rubber tile and asphalt tile floors, diato stairs, interior plaster, forced air heating, central gas water heater, tile baths and stall showers, sliding wardrobe doors, concrete court, swimming pool, asphalt paving—$45,000. ENGINEER: Thos. R. Cooper, Los Angeles. GENERAL CONTRACTOR: Barsel Constn Co, Los Angeles.

SOCIAL HALL & CHURCH, Huntington Beach, Los Angeles county. Wintersburg Community Methodist Church, Huntington Beach, owner. Social hall and classroom addition to present building; 6000 sq. ft. floor area, frame and wood siding construction, asbestos shingle roofing, concrete and asphalt tile floors, forced air heating, wood sash, interior plaster, toilet rooms. ARCHITECT: Frederick Hodgdon, Newport Beach. GENERAL CONTRACTOR, Walter Beck Constn Co, Newport Beach.

ADVANCED RESEARCH BLDG, Palo Alto, Santa Clara county. Hiller Helicopter, Palo Alto, owner. 1-Story, reinforced concrete tilt-up walls, concrete floors—$110,000. ARCHITECT: Vincent

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	43.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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G. Raney, San Francisco. GENERAL CONTRACTORS: Vance M. Brown & Son, Palo Alto.

MAUSOLEUM-CHAPEL, ADD'N, San Rafael, Marin county. Mt. Tamalpais Cemetery & Mausoleum, San Rafael, owner. Reinforced concrete and marble construction of a Columbarium, Chapel and Mausoleum addition—$130,000. ARCHITECT: Albert R. Williams, San Francisco. GENERAL CONTRACTOR: Dinwiddie Const. Co, San Francisco.

COMMERCIAL GARAGE, Pasadena, Los Angeles county. Sam Gates, Pasadena, owner. Concrete block commercial garage, built-up composition roofing, skylights, reinforcing and structural steel, overhead doors, office area, toilets, paint spray booth, asphalt concrete paving, cesspool and septic tank; 3160 sq. ft. floor area—$23,000. ARCHITECT: Richard Leitch. Pasadena. GENERAL CONTRACTOR: Bossart Constn Co, Monrovia.

WASTE DISPOSAL PLANT, Aerojet, Nimbus, Sacramento county. Aerojet General Corpn, Nimbus, owner. Desludge system, safety shelters, revetments, foundations — $638,912. GENERAL CONTRACTOR, Drake & Piper, Oakland.

YOUTH CENTER, Inglewood, Los Angeles county. Presbyterian Church, Los Angeles, owner. 2-story, frame, stucco and brick building; 12,000 sq. ft. of floor area, composition and tile roof, concrete slab floors, brick entry, acoustic tile and exposed ceilings, central heating and ventilating systems, tapered steel beams, used brick fireplace with copper hood, insulation, sheet metal, skydomes, double hung and sliding windows, plumbing, electrical, asphalt paving. ARCHITECT: Maurice H. Robertson, Palos Verdes Estates. GENERAL CONTRACTOR: E. Illingworth, Inglewood.

BRANCH BANK, San Francisco. Hibernia Bank, San Francisco, owner. 1-Story, frame and stucco construction—$84,932. ARCHITECT: Hertzka & Knowles, San Francisco. GENERAL CONTRACTOR: Jacks & Irvine, San Francisco.

HIGH SCHOOL ADD'N, Los Gatos, Santa Clara county. Los Gatos Union High School District, Los Gatos, owner. Addition to comprise three swimming pools and girls shower and locker rooms; structural steel frame and frame and stucco construction — $184,474. ARCHITECT: John Lyon Reid & Sobey & Green, Associates, San Francisco. GENERAL CONTRACTOR: Carlson Constn Co, Saratoga.

RESTAURANT, Los Angeles. Hadley-Cherry, Inc., Los Angeles, owner. Concrete block restaurant building, 35x62 ft., composition and gravel roofing, concrete and terrazzo floors, interior plaster, central heating and electrical exhaust fans, refrigerator room, insulation, stone veneer, asphalt and concrete paving, plate glass — $25,000. ARCHITECT: Chas. O. Matcham, Los Angeles. GENERAL CONTRACTOR: Hadley-Cherry, Inc., Los Angeles.

COUNTY JAIL, Sacramento. County of Sacramento, Sacramento, owner. 6-Story reinforced concrete lift-slab construction; three elevators, jail equipment; also additions and remodel of existing jail building —$1,634,221. ARCHITECT: Harry J. Devine. Sacramento. GENERAL CONTRACTOR: Stolte, Inc., Oakland.

FURNITURE WAREHOUSE, Belmont, San Mateo county. Lyon Van & Storage Co, San Francisco, owner. 3-Story, reinforced concrete building; truck size elevator; 35,000 sq. ft. area—$269,400. ARCHITECT: Allison & Ribble, Los Angeles—Supervising Architect, Blanchard & Maher, San Francisco. GENERAL CONTRACTOR: Williams & Burrows, Belmont.

MEN'S DORMITORY, Tempe, Arizona. Arizona State College, Tempe, owner. 3-Story men's dormitory and administration building, 145 rooms, masonry and steel construction, built-up roof, asphalt tile, gas-fired heating, refrigerated air conditioning, acoustical tile, steel sash, ceramic tile, steel roof trusses, terrazzo; dormitory will be a 2-wing structure and house 120 students — $876,885. ARCHITECT: Weaver & Drover, Phoenix. GENERAL CONTRACTOR: H. L. McCoy Co, Tucson, Ariz.

BANK BLDG, Vacaville, Solano county. Vaca Valley Bank, Vacaville, owner. 1-Story frame and stucco, reinforced concrete vault—$80,000. ARCHITECT: Hollis Logue, San Jose. GENERAL CONTRACTOR: E. F. Schrock, Napa.

DETENTION HOME, Nevada City, Nevada county. County of Nevada, Nevada City, owner. 1-Story concrete block and frame construction — $47,813. ARCHITECT: Russell G. deLappe & Mitchell Van Bourg, Berkeley. GENERAL CONTRACTOR: Steve M. Cheleski, Grass Valley.

GYMNASIUM BLDG, Gonzales High School, Monterey county. Gonzales High School District, Gonzales, owner. Frame and stucco construction with some structural steel — $223,077. ARCHITECT: Robert Stanton, Carmel. GENERAL CONTRACTOR: Tombleson & Huck, Salinas.

CONVALESCENT HOSPITAL, Long Beach, Los Angeles county. Kenneth W. McCulloch and Hal Fisher, Long Beach, owners. Frame and stucco, 40-bed, 28-room convalescent hospital; 8250 sq. ft. floor area, composition roofing, concrete and asphalt tile floors, forced air heating, wood projecting sash, interior plaster, toilet rooms, ceramic tile, kitchen — $50,000. CIVIL ENGINEER: W. W. Crone, Downey.

COUNTY HOSPITAL (Remodel), Colusa, County of Colusa, Colusa, owner. Interior remodel, new fire doors, new partitions to provide facilities for new X-ray laboratory, sterilization department, and laboratory—$44,660. ARCHITECT: J. S. Gould, San Francisco. GENERAL CONTRACTOR: Burroughs & Son, Marysville.

HIGH SCHOOL ADDN, Pittsburg, Contra Costa county. Pittsburg Unified School District, Pittsburg, owner. Remodel present building and construct an addition to the automobile shop; frame and stucco construction with some structural steel—$174,039. ARCHITECT: Cantin & Capell, San Francisco. GENERAL CONTRACTOR: Peter Sartorio, San Francisco.

CHURCH, OFFICE, FELLOWSHIP HALL, Carmel, Monterey county. Church of the Wayfarer, Carmel, owner. Two story building with 1st floor reinforced concrete; 2nd floor frame and stucco construction; composition shingle roof, vinyl tile floors; 7,500 sq. ft floor area—$118,893. ARCHITECT: William D. Concolino & Morgan L. Wilcox, Monterey. GENERAL CONTRACTOR: F. V. Hampshire, Salinas.

TUNNEL, Poe Hydroelectric Plant, Feather River area, Plumas county. Pacific Gas & Electric Co, San Francisco, owner. Contract calls for driving a 24-foot diameter tunnel a distance of 6¼ miles; new facilities will develop additional power for northern and central California—$35,000,000. GENERAL CONTRACTOR: Utah Construction Co., and Bates & Rogers Constn Corp., San Francisco.

AIR FORCE ACADEMY ROADS, Colorado Springs, Colorado. AF Academy Constn, agency, Colorado Springs, owner.

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WAREHOUSE, San Jose, Santa Clara county. Juillard Inc., San Jose, owner. 1-Story, reinforced concrete construction; wood roof trusses and wood roof; 10,800 sq. ft. floor area—$45,988. STRUCTURAL ENGINEER: J. Y. Long, Oakland. GENERAL CONTRACTOR: Lew Jones Constn Co, San Jose.

DEPT. STORE, Macy's Valley Fair branch, near San Jose, Santa Clara county. Macy's Department Store, San Francisco, owner. 1-Story and basement, reinforced concrete construction; 150,000 sq. ft. floor space—$2,634,000. ARCHITECT: Victor Gruen, San Francisco. GENERAL CONTRACTOR: Haas & Haynie Constn Co, San Francisco.

IN THE NEWS

ARCHITECT SELECTED

Architect Harry J. Devine of Sacramento has been selected by the Modesto Unified School District to draw plans and specifications for construction of a new Auditorium Building at the Modesto Junior College.

SUNDAY SCHOOL

Architect Leslie I. Nichols of Palo Alto is completing drawings for construction of a two-story frame and stucco Sunday School building to be built as part of the Menlo Park Presbyterian Church in Menlo Park.

NEW OFFICE BUILDING

Architect Wm. Edward Schirmer of Oakland is completing drawings for construction of a one-story and mezzanine concrete block and frame office building to be built in Alameda for the First Savings & Loan Association of Oakland.

The building will be 60x80 ft. in area and will cost an estimated $100,000.

INDUSTRIAL AND TECHNOLOGY BLDG.

Architect Ralph Haver of Phoenix, Arizona, is completing plans for construction of an Industrial and Technology building in the City of Phoenix for the Arizona State College.

Estimated cost of the project is $1,000,000.

EL CENTRO HIGH SCHOOL ADDITION

Architect Bolton C. Moise, Jr. of Riverside is completing plans for construction of a 12 classroom and toilet facilities addition to the El Centro Union High School.

The building, of steel frame construction, will contain 21,000 sq. ft. of floor area.

LIBRARY BUILDING NEWLY DEDICATED

A new $54,800 branch of the Ventura County Public Library was recently dedicated at Fillmore, with Mrs. Mildred Spiller, county librarian, and Lester A. Price, chairman of the county board of supervisors, presenting the library building to the people of the community.

Architect Roy C. Wilson of Santa Paula, was the architect for the project.

COUNTY COURT AND ADMINISTRATION

Architect Ernest L. McCoy of Bakersfield, is completing drawings for construction of a new Kern County Court House and Administration Building which will be built in the City of Bakersfield at an estimated cost of $3,988,000.

The new civic building will be seven stories high, plus basement, and will be of reinforced structural steel and concrete construction, concrete floors, insulation, elevators; and will contain 177,800 sq. ft. of floor area.

SUNDAY SCHOOL AND SOCIAL HALL

Architect G. N. Hilburn of Modesto is completing drawings for construction of a new Sunday School and Social Hall building in Hughson for the First Baptist Church.

The new church facilities will be of one-story, plus basement, reinforced concrete and concrete block construction. Estimated cost is $45,000.

NEW PARTNERSHIP IN ARCHITECTURAL FIRM

The architect firm of Absmeir & O'Leary, Los Angeles, has been changed to Absmeier, O'Leary & Terasawa, according to a recent announcement.

Tosh Terasawa, new member of the firm, has been associated with the organization for the past six years. A native of California, Terasawa is a graduate of the University of Southern California School of Architecture and was licensed in 1951.

CONSTRUCTION AT LAS VEGAS

Las Vegas, Nevada, continues to expand constructionwise with a number of new projects recently announced.

The San Souci Hotel has commissioned William Leavers to design a new Sun Deck and Snak Bar for the hotel.

Architects Zick & Sharp, Las Vegas, have been commissioned to prepare drawings for construction of the Silver Palace Club for the Spinning Wheel Corp.

LOS ANGELES FORT MOORE MEMORIAL

Architects Kazumi Adachi & Dike Magano of Los Angeles, have been commis-

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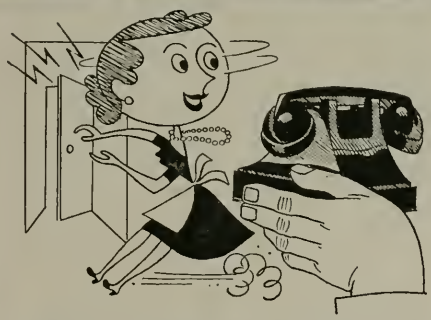

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sioned by the Los Angeles county board of supervisors to prepare plans and specifications for construction of the embellishments on the north and south wall of the Fort Moore Memorial, to be erected in Los Angeles at an estimated cost of $107,731.

SMOOT-HOLMAN ANNOUNCES PERSONNEL CHANGES

C. E. Smoot, Jr., formerly District Sales Manager in the firm's San Francisco office is now Sales Manager in the home office in Inglewood, California. Smoot has been associated with the company for eighteen years, working in Texas, San Diego, and Seattle, as well as San Francisco.

EDWARD A. REVAY GETS APPOINTMENT

Edward A. Revay of Los Angeles, has been appointed a member of the technical staff of the Lynch Asbestos Company, Los Angeles.

Revay will be in charge of the company's "control" program.

OPENS ARCHITECTURAL OFFICES IN MARYSVILLE

Robert S. Oliver, A.I.A., Architect, has announced the opening of new offices in Marysville, California, for the general practice of architecture.

Offices are located at 916 F Street.

SANTA CLARA COUNTY BUILDING NEW JAIL

Architect Frank C. Treseder of San Jose; Structural Engineer H. J. Brunnier of San Francisco; and Mechanical Engineer G. M. Simonson of San Francisco are jointly working on drawings for construction of a new $1,000,000 County Jail building to be built in San Jose for Santa Clara county.

The new building will be three story height, plus basement, "T" shaped, reinforced concrete, steel security sash in jail, elevators, concrete floors; 60x200 ft.

DeLappe & Van Bourg of Berkeley are consulting architects.

MEDICAL BUILDING FOR RENO, NEVADA

Architect Russell Mills of Reno, Nevada, is completing drawings for construction of a new 10-suite Medical Building in Reno, at an estimated cost of $120,000.

The new building will be 2-stories high, with basement, and will be of structural steel frame, and brick veneer construction.

COLLEGE PROJECT BEING READIED

A $115,000 school expansion project at Orange Coast College at Costa Mesa, is well under way and will be completed in time for opening of the Fall school year, according to William F. Kimes, assistant school superintendent.

New facilities include several classrooms, laboratory, faculty offices and an addition to the library.

Architects are Richard Neutra, Robert Alexander and Richard Pleger of Los Angeles.

CATHOLIC CHURCH FOR RIVERSIDE

Architect Jerome G. Armstrong of San Bernardino is completing drawings for construction of a new Catholic Church and social hall at Riverside for the Bishop of the San Diego Diocese.

The building will be frame and stucco construction with a total floor area of 3,000 sq. ft.

SMALL ANIMAL HOSPITAL

Architect Herman C. Light of Los Angeles is completing drawings for construction of a frame and stucco small animal hospital to be built in North Long Beach.

The building will be concrete slab, plaster walls and ceilings, and will contain 2400 sq. ft. of area.

CIVIC AUDITORIUM SANTA MONICA

Architects Barienbrock & Murray of Santa Monica, and architects Kliegman & Leizer of Los Angeles, have completed drawings for construction of a Civic Auditorium for the City of Santa Monica.

The building will be of reinforced concrete construction with the main auditorium seating 3500 persons; removable seats, hydraulic floor lift to facilitate boxing, tennis and basket-ball exhibitions.

PLUSH HORSE RESTAURANT

Architect Martin Stern, Jr., of Beverly Hills, is completing drawings for construction of the Plush-Horse Restaurant in Hollywood Riviera.

The building will be a 2-story English style restaurant of 22,000 sq. ft. area, and will include a cocktail lounge and banquet rooms. Estimated cost is $1,000,000.

ARCADIA POLICE AND CITY HALL

Architects Neptune & Thomas of Pasadena are completing drawings for construction of police facilities and an addition to the Arcadia City Hall.

FONTANA COMMUNITY CHURCH ADDITION

Architects Frick & Frick of Pasadena are preparing drawings for construction of a 2-story, frame and stucco educational unit for the Fontana Community Church.

The building will contain 14,000 sq. ft. of area.

UNIVERSITY OF SOUTHERN CALIFORNIA EXPANSION

Twenty-six new major buildings and additions are contemplated in a new 25 year, $75,000,000 program at the University of Southern California.

Announcement of the program by Fred D. Flagg, Jr., president of the university, highlighted the Diamond Jubilee being observed this year.

The master plan calls for new buildings with an extensive program to expand cur-

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rent departments and to provide funds for endowments, professional chairs and research activities.

STANFORD MEDICAL SCHOOL ARCHITECT SELECTED

Architect Edward D. Stone of Palo Alto and New York City, has been commissioned by the Stanford University Board of Trustees to prepare drawings for construction of the new Palo Alto General Hospital which is to be constructed on Stanford University campus.

The project, a joint effort of the City of Palo Alto and Stanford University, will include a Medical School and teaching hospital containing 284 beds, together with administrative and all necessary facilities.

Work on the initial part of the program will start immediately and will cost $5,000,000. Total cost of the project is estimated at $15,000,000.

BUSINESS RESEARCH DIRECTOR NAMED

Howard A. Stevens has been appointed director of Business Research for the Kawneer Company, Niles, Michigan, according to Henry W. Zimmer, executive vice-president of the firm.

Stevens will assist in making surveys and studies of industries, markets and businesses pointing toward the enlargement of Kawneer activities through acquisition of new products and companies.

SCHOOL BONDS APPROVED

Voters of the Santa Cruz Unified High School District approved the issuance of $780,000 in school bonds with proceeds to be used in rehabilitation of the Santa Cruz High School.

The architectural firm of Risley & Gould, Los Angeles, and Hillman & Nowell, structural engineers of Los Angeles, have been comissioned by the school board to design plans and specifications for the work.

NEW COUNTY OFFICE BLDG.

Architect Edward D. Cerruti of Oakland is completing drawings for construction of a new Alameda county office building to be built in Hayward, at an estimated cost of $1,225,000.

The new building will be 1 and 2 story structural steel, frame and metal lath and plaster, stucco exterior construction, and will contain 88,500 sq. ft. of floor space.

ARCHITECT SELECTED

Architects J. E. Stanton and William F. Stockwell of Los Angeles, have been selected to draft plans and specifications for construction of a new Office and Laboratory building in the Stanford Village, near Menlo Park, San Mateo county.

The office building will contain 100,000 sq. ft. of floor area, while the laboratory building will have 20,000 sq. ft. of floor space. Estimated cost of the project is $1,500,000.

HIGH SCHOOL AUDITORIUM

Architect Charles N. Dougherty of Vallejo is completing drawings for construction of a small Auditorium building at the Franklin Jr. High School in Vallejo.

Of frame and stucco construction, with some structural steel and reinforced concrete, the building will cost an approximate $150,000.

SUPER MARKET

Architect Todd Hart of Sacramento has completed drawings for construction of a new Safeway Market building in Chico.

The 1-story building will be of concrete block and concrete tilt-up construction with wood roof and brick veneer front. It will be 110x185 feet in size.

PRITCHARD COMPANY APPOINTS AGENCY

The J. F. Pritchard Company of California, Kansas City, Missouri manufacturer of cooling towers for air conditioning and industrial applications, has appointed the Tate Engineering & Supply Company, Inc. of Baltimore Maryland as sales representative for the state of Maryland.

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Architect Leonard F. Starks of Sacramento and consulting architects Stone,

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Mulloy & Marraccini of San Francisco, are completing plans for construction of a 98-bed and 4-operating room addition to the Sutter Hospital in Sacramento.

The new buildings will be 3-stories in height and of reinforced concrete construction; 57,000 sq. ft. of floor area, and will cost an estimated $1,500,000.

CARLETON PIERSON RETIRES FROM OFFICE

Carleton Pierson, Supervising Contract and Building Specifications Writer for the California State Division of Architecture for more than 43-years, retired from active service on August 1st.

Pierson's first assignment with the state was as an assistant to the office boy and consisted of making blue prints, running the mimeograph machine, proofreading specifications, and mailing out plans and specifications.

JAMES C. ROBERTS NAMED MANAGER

James C. Roberts has been named Contracting Manager in charge of the San Francisco District office of the American Bridge Division of the U. S. Steel Corpn, succeeding J. R. Fox who is retiring after 46-years with the firm.

Roberts is a native of Quincy Mine, Michigan, and is a graduate of the University of Michigan with a B.S. degree in architectural engineering.

ARCHITECT SELECTED

Architects Schmidts and Hardman of Berkeley have been commissioned by the Richmond High School District to draft plans and specifications for conversion of the Harry Ells Junior High School into a Senior High School.

CONGREGATIONAL CHURCH

Architect Fred M. Guirey of Phoenix, Arizona, is completing plans for construction of the North Congregational Church in Phoenix.

The chapel will seat 450 persons. Construction is of native stone walls, cedar shake shingle roofing, and parking for 230 automobiles. Estimated cost is $100,000 for first work.

ARCHITECT SELECTED

Architect Donald L. Hardison of Richmond has been commissioned by the Richmond Elementary School District to draft plans for construction of three portable classroom buildings to be erected at the Ford Elementary School in Richmond.

The buildings will be of frame construction.

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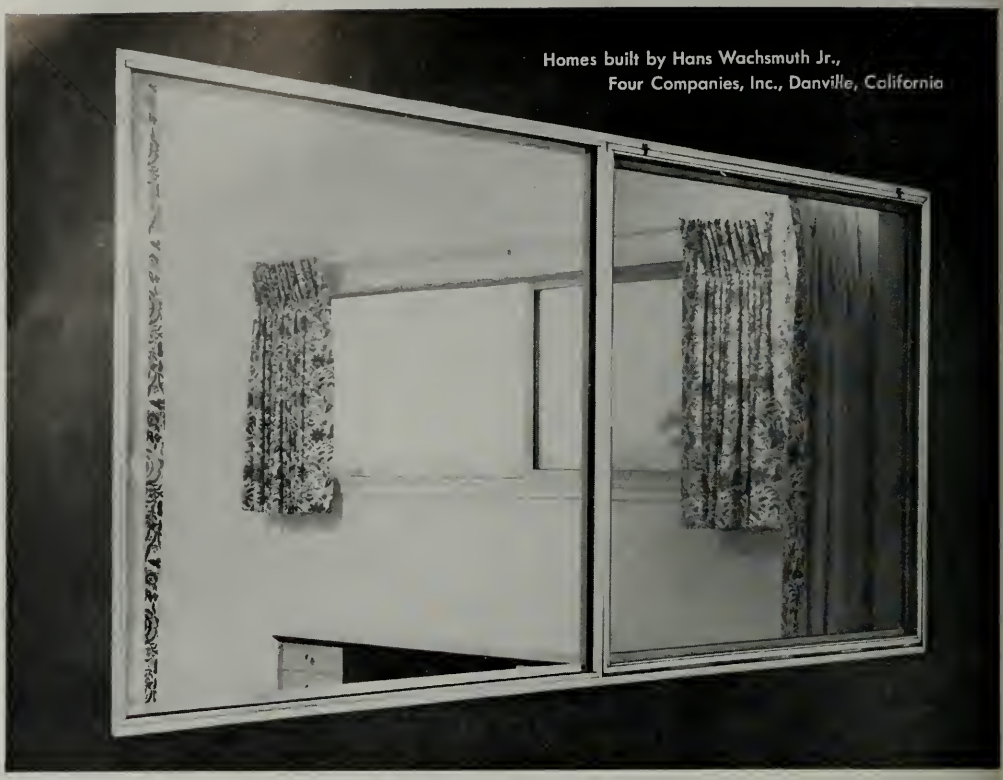

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COVER PICTURE

American River
FOLSOM DAM
Folsom, Calif.

A key project of the U.S. Army Corps of Engineers in development of California's hydroelectric power and water resources, nearing completion.

Fifty-foot steel gates at right regulate the river water level behind dam.

Merritt, Chapman, and Scott Corp. of N. Y.; and Savin Constn. Corp., East Hartford, Conn., General Contractors.

United States Steel Photo

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135. — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy, 50c.

. EDITORIAL NOTES .

YOU WILL PAY MORE

The recent increase in steel prices, resulting from an adjustment in wages paid workers throughout the steel industry, has already set in motion a series of cost-of-living boosts which will extend along a wide industrial front.

In the construction industry, many manufacturers who fabricate products made of steel will up their prices to meet increased costs to them, and this in turn will increase the cost of construction.

Higher steel prices will not end there, as it is not merely the higher cost of raw materials that have to be passed along, but wage boosts in many of the related industries.

Combine an increase in raw materials with an increase in labor costs and what does it add up to? . . . according to past experience, the combination spells out "increased building costs" for the owner.

* * *

"No industry can remain healthy and dynamic without recognition, both within and without, of the necessity of individual units operating profitably."—J. Wilson Newman, president, Dun & Bradstreet, Inc.

* * *

LOG-ROLLING

Congress has formally declared that no Defense Department operation competing with private enterprise could be eliminated without its consent.

It did more than that. It served notice that a roadblock was purposely set up in the path of the Department's program of getting out of business-type activities.

A provision (Section 638) of the $32-billion Defense Appropriation bill for 1956 says that when the Secretary of Defense wants to cut out any work performed for three years or more by civilian personnel in the Department, he must justify such stoppage to the Appropriations Committees of the Senate and House 90 days in advance.

Either committee has the right to disapprove. And its action is final! The law does not require consideration by the full Congress.

It is not logical to expect any Secretary of Defense to fight in the future to eliminate a post laundry, a bakery, a coffee roasting plant, or a rope factory, when such action might jeopardize major items in a pending appropriations bill.

Any person familiar with how "politics" works knows it will be next to impossible to eliminate activities that really count. No doubt some trivial operations will be discontinued, but anything involving more than a handful of employees or costing substantial sums is going to stay right where it is for a simple reason: it will mean the loss of federal government jobs, and in plain English that means votes.

This is not true, actually, because if the work which the government is doing is important, those same employees can be rehired by private enterprise to do the same work.

* * *

In 1954 farm woodlot owners sold forest products equal in value to the entire truck garden crop for the nation.

* * *

HOME OWNERS COSTS

A lot of discussion can be heard on the relative merits of home ownership vs. home renting and in the vast majority of instances the dominating arguments merely reflect the opinion and thinking of the individual.

Without getting into any of the pro's and con's of the oft debated situation, it is very interesting to view the results of a nation-wide survey conducted by the Federal Housing Administration to determine some of the costs confronting a prospective home owner.

The average buyer of a FHA-financed home last year, for instance, had a $5,139 income and bought a house and lot worth $10,678.

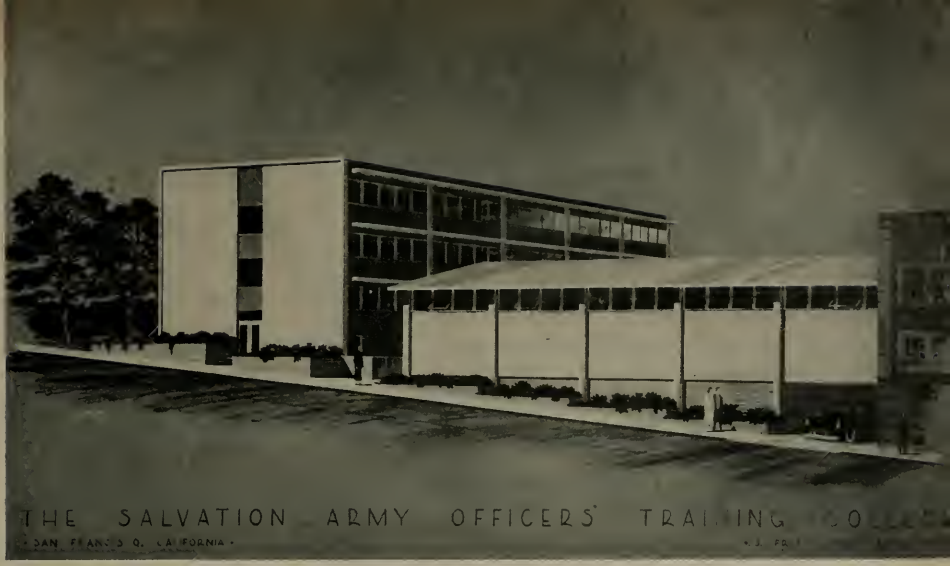
A family man shopped around until the average shows a five and one-half room house that included three bedrooms and a garage, as well as a kitchen and living area.

The average FHA-financed home buyer appeared to be in better than average financial condition and made an initial down payment of fifteen per cent there by taking a FHA insured mortgage of $8,862 on the balance of the purchase price.

The average FHA-financed home buyer planned to pay the balance due on his newly acquired home over a period of twenty-three years, and made the arrangements to do it at the rate of $68.62 per month, including real estate taxes, insurance and interest.

The deferred payments represented a little more than fifteen per cent of his income—an income which averaged higher than in any previous year and indicated the prospective home buyer is receiving approximately five per cent more income now than was the typical FHA-financed home buyer in the so-called peak year of 1953.

The reported figures indicate that home buying will continue at an excellerated rate for some time to come.



THE SALVATION ARMY OFFICERS' TRAINING COLLEGE

SAN FRANCISCO, CALIFORNIA

ARCHITECT: J. FRANCIS WARD

GENERAL CONTRACTOR: DINWIDDIE & COMPANY

Completion of the new Officers Training College of the Salvation Army in San Francisco provides modern facilities for an accelerated program of training officers and lay workers to carry out expanding Salvation Army activities in the West.

The new building, and remodeled buildings, are of contemporary design with marble facing on Geary street and reinforced concrete construction. The new Dormitory provides sixteen units for married couples, divided into eight single apartments and eight double-room apartments; ten units for female cadets with three cadets in each unit. The old Dormitory will now provide facilities for twenty male cadets.

Four two-story frame and stucco additions to former buildings will now be used for housing of training college faculty and personnel, with a basement storage room for band instruments. The all-purpose auditorium type of building provides a platform, hardwood flooring, and will seat a maximum of 300 persons.

Parking facilities are located under the all-purpose building for cadets, college staff, and the general public. There is a large recreation area and drill field immediately adjacent and special provision has been made for housing of the Training College bus.

The general facilities of the College are now valued at more than a million dollars with the new additions and remodeling carried out at a cost in excess of $650,000.

The Salvation Army Officers Training College in San Francisco was established in 1922 and trains cadets from the western states, Alaska, and Hawaii. The new facilities will increase possible student body enrollment from 35 to 90, and will also provide for fifteen faculty instructors, plus the principal of the Training College, Lt. Col. R. B. Fitton of The Salvation Army.

NEWS and COMMENT ON ART

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is opening the fall season of special exhibitions with an Architects and Decorators Exhibition.

The showing will continue through September 29.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, which is under the direction of Thomas Carr Howe, Jr., is offering the first of a series of fall and winter exhibitions and special events, including:

EXHIBITIONS: A completely integrated house, designed by Jack Hillmer. An elegant house has resulted from the integration of building and site together with the client's desires, producing an uncommon synthesis of building, equipment, and furnishings through a complete design. The 70 panels of the exhibition of this house are predominantly of large color photographs.

Pastels and Watercolors, by Nancy Galantiere; American Paintings, from the Museum Collections; Loan Exhibition of French Paintings; World at Work, and a group of photographs by H. Bowden. A special exhibition of jeweled objects will be shown until September 25. This exceptional exhibition is by Salvador Dali, lent by the Catherwood Foundation, and is being shown for the benefit of Guide Dogs for the Blind.

SPECIAL EVENTS: The Saturday morning paint-

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING, CIVIC CENTER

IN THE MEADOW, oil, 32 x 25¾"

PIERRE AUGUSTE RENOIR
1841 - 1919

Lent to the Renoir Exhibition by the Metropolitan Museum of Art, Bequest of Samuel A. Lewisohn.

This comprehensive exhibition of the work of Pierre Auguste Renoir, organized by the Los Angeles County Museum in association with the San Francisco Museum of Art for showing at the two museums, is drawn from private and museum collections in this country. It has been possible to include in the exhibition a distinguished painting of nearly every year of the artist's career, from 1865 until his death in 1919, and, in addition, fine examples of his work in drawing, pastel and watercolor, as well as graphics and a wide range of his sculpture.

ing classes for children, ages 6-14, will be resumed September 24th at 10 o'clock. Classes are free and materials are furnished. Organ program each Saturday and Sunday at 3 p.m.

The Museum is open daily.

CARVINGS AND DRAWINGS BY BARBARA HEPWORTH

A group of 17 carvings and 14 drawings by the contemporary British sculptor, Barbara Hepworth, is being currently shown at the San Francisco Museum of Art. The carvings include work in wood and stone and some employ color. The exhibit will be shown until October 16th.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is offering another of the major events of the Museum's 20th anniversary year, an exhibition of the work of the famous French artist, Pierre Auguste Renoir. This special exhibition will continue through October 2. Other exhibitions scheduled for September include:

EXHIBITIONS: Paintings, drawings, prints, and sculptures, by Pierre Auguste Renoir. An exhibition organized by the Los Angeles County Museum in association with the San Francisco Museum of Art for showing at the two museums only; carvings and drawings, by Barbara Hepworth, and the John Marin Memorial Exhibition.

SPECIAL EVENTS: Lecture tours of the Museum each Sunday at 3 o'clock; Wednesday evening, gallery tours, 8:30 p.m.; Museum Library, rental gallery and bookshop are open. Adventures in Drawing and Painting, classes start September 23 and include the Sketch Club and the painting class; Studio Art, for the layman, is designed to awaken and develop inherent artistic potentialities for the laymen; and the children's Saturday morning art classes, starting September 24; each Saturday morning from 10 to 11, ages 6-14.

SCULPTURE IN SILVER FROM ISLANDS IN TIME

An exhibition sponsored by the Towle Silversmiths in cooperation with the American Federation of Arts, will be shown on the West Coast with exhibits being scheduled for the M. H. DeYoung Memorial Museum in San Francisco from January 8 to 29; and the Seattle Museum of Arts from February 12 to March 4.

The exhibition comprises small silver sculpture from periods of art history from the early Egyptian to 1955. Eight contemporary sculptors are represented in the showing: David Smith, Ibram Lassaw, Richard Lippold, Oronzio Maldarelli, Cecil Howard, Jose de Creeft, Jose de Rivera, and William Zorach.

ACHENBACH FOUNDATION FOR GRAPHIC ARTS EXHIBITION

The Achenbach Foundation for Graphic Arts is exhibiting at the California Palece of The Legion of Honor, Lincoln Park, San Francisco, an exhibition of America Today, by contemporary artists, and Surrealism and its Forerunners, a group of prints from Durer to Dali.

On loan exhibition at the San Francisco Public Library is an exhibition from the Shakespeare Gallery, by John Boydell (1719-1804).

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is opening the fall schedule of special exhibitions and events with a number of outstanding events, including:

EXHIBITIONS: Contemporary Italian Prints; Paintings by Henry J. Dietrich; Paintings by Milton Resnick; Portraits by Alfred Jonniaux; Suggestions—Handwoven Fabrics for Interior and Fashion, representing the sixth annual exhibition of the Contemporary Handweavers of California; Three Centuries of Printmaking in America, from the collection of the International Business Machine Corporation; the W. R. Cameron Watercolors, and the San Francisco Art Association, show No. 4, comprising an exhibition of paintings by Wally Hedrick and Julius Wasserstein, and sculpture by Jeremy Anderson.

SPECIAL EVENTS: Classes in Art Enjoyment for adults includes Painting for Pleasure—Exercises in Perception, a course offering an opportunity, by learning to paint, to develop a more active enjoyment of art and all visual experience; Painting Workshop for Amateurs, painting from the model and still life motifs for the practice and observation and appreciation; Seminars in the History of Art, and for children, ages, 4-8, classes in Picture Making, Art in Nature, ages 9-11, and the Art Club for students 12 to 15 years old. All classes are free of charge.

SAN FRANCISCO MUSEUM GIVEN ROCKEFELLER GRANT

The San Francisco Museum of Art has received a grant of $3,000 from the Rockefeller Foundation for an experimental program designed to increase interest in contemporary original works of art in the public schools of San Francisco.

The grant will extend over a period of three years.

FIFTH ANNUAL

SCHOOL PLANNING CONFERENCE

CONDUCTED BY SCHOOL PLANNING LABORATORY, SCHOOL OF EDUCATION, STANFORD UNIVERSITY, PALO ALTO

BY Dr. JON S. PETERS, Educational Consultant, School Planning Laboratory, Stanford University, Stanford, California,

and

Dr. James D. MacConnell, Associate Professor of Education and Director, School Planning Laboratory, Stanford University.

The Fifth Annual School Planning Conference, conducted by the School Planning Laboratory, School of Education, Stanford University, considered trends in school planning. The Conference is held for school administrators, architects, and school board members to see some of the changes in the total school planning approach. Grossly, there are three broad areas in which school planning is undergoing constant change. Basically, educational programs are constantly evolving. No longer does school consist merely of learning a multitude of relatively unrelated facts and skills. Rather, school experiences are aimed toward attainment of the generally accepted educational objectives of health, citizenship, skill, and enrichment.

Actual curricular content varies from community to community, but in all cases is much different from the curricular content of a few decales ago. The point of departure for all adequate school planning is the educational program.

The second area of change in school planning is that of the increasingly wide participation in planning. Time was when the architect and the administrator planned school plants on the basis of their own likes and dislikes. Quite often such plants were monumen-

"PLANNING WITH OUR NEIGHBORS"—Panel members (L to R) Ernest Hara, Honolulu; Ricardo Rubio, Assistant Director, Comite Administradar Del Programa de Construcctian de Escuelas, Mexico City; Arq. L. G. Rivadeneyra, Director, Comite Administradar de Programa Federal de Construcction de Escuelas, Mexico City; Dr. James MacConnell; Mario Ciampi, architect, San Francisco; and Dr. Keith Galdhammer of Stanford University staff.

tal in nature and failed to serve the educational program almost entirely. Now educational planning involves members of the community, the teaching staff, the non-certificated staff, the students, the administrators, educational consultants, architects, and representatives of various governmental agencies.

The third broad area of change in educational planning has to do with physical materials. Industry is constantly developing and perfecting new types of equipment and building materials. The most satisfactory things used in school construction today will be obsolete tomorrow. It is desirable then for school planners to become familiar with as many of the new developments as possible.

Although many American communities are faced with acute teacher and plant shortages, some of our neighbors are in much worse shape. Arq. L. G. Rivadeneyra, Director, Comite Administrator del Programa Federal, De Construccion de Escuelas, Mexico City, stated that of Mexico's total school-age population of nearly 7,000,000 only slightly more than 3,000,000 were able to attend school because of a lack of classrooms and trained teachers. The Committee is making a systematic analysis of classroom needs for the whole country and at the same time is attacking the actual problem in many areas although

Dr. Paul R. Hanna, Professor of Education ot Stanford University, and Coordinator of the Stanford University — University of the Philippines Contract.

Howard Perrin, architect of Klamath Falls, Oregon (pointing) discussing structural details with graduate students Tony Matterlich and John Laughlin.

there is a serious limitation of funds. One answer which this Committee has developed is the Hidalgo classroom which is simple of design and quite functional. Because of the extreme seriousness of the facility shortages, classrooms in Mexico are constructed without most extras which we deem essential. Generally a classroom consists of four walls and a roof with an absolute minimum of equipment.

Hawaii is faced with extremely critical school housing shortages. Although the population is booming to the extent that it is in certain areas of Texas and California, there has still been extreme growth and these classroom shortages here are complicated by extremely high costs of site acquisition and construc-

Dr. James D. MacConnell, Al Whittle, architect with the Los Angeles city schools, and Dr. William R. Odel.

DISCUSSING MASTER PLANNING: M. Ted Dixon, Associate Superintendent of La Mesa (i. to r.), Glenn E. Murdock, Superintendent, La Mesa, California schools; Donald A. Marshall and Harold Hopkins, graduate students; James D. MacConnell, Stanford University School of Education; John Carl Warnecke, architect, San Francisco; Keith Goldhammer, Stanford staff, and Jon Peters, School of Education, Stanford University, considering the master planning for the La Mesa-Spring Valley School District . . . a rapidly growing area with many problems of providing adequate school facilities. Master planning in this community has been well organized and effective.

tion. For example, some school sites have sold for as high as $60,000 per acre.

The Richmond problem was presented by Doctors Keith Goldhammer of the Stanford School of Education staff, Don Woodington, Assistant Superintendent, Richmond Public Schools, Richmond, California, and William Finley, Consultant, Richard Graves and Associates of Oakland, California.

Case studies from Richmond, California, Beatrice, Nebraska, and La Mesa, California were considered by the Conference. John Shaver, architect from Salina, Kansas stated, "In any school planning situation it is of the utmost importance that educational objectives and programming needs to be developed. School people, with the help of educational consultants, community groups, governmental agencies, and the architects should have a clear picture of the educational program. The point of departure for any architectural planning has to be in terms of the educational needs. Too often plants have been built and the educational programs fashioned to fit these plans."

The educational planning for Beatrice, Nebraska offers an interesting and unusual approach. In this community all of the elementary schools were obsolete and were at the stage where maintenance and

(See page 33)

Dr.'s James MacConnell and Jon Peters discussing the placement of a classroom wing on site, using a model.

ECONOMIES IN SCHOOL CONSTRUCTION—James Tormey, San Mateo county Superintendent of Schools (left); Eugene Silke, Superintendent of Schools, Troutdale, Oregon; Emil te Groen, Cambridge Tile Mfg. Co.; and Frank Cox, Kawneer Company, discuss the all important problem of construction costs.

MODERN AS TODAY

TIOGA BUILDING

BERKELEY, CALIFORNIA

E. J. SCHRUERS, Architect

H. M. BLACK, JR., Engineer

ASSOCIATED INVESTMENT COMPANY, OWNERS

BY HERBERT H. HASTINGS,
Co-owner, Bayshore
Construction Company

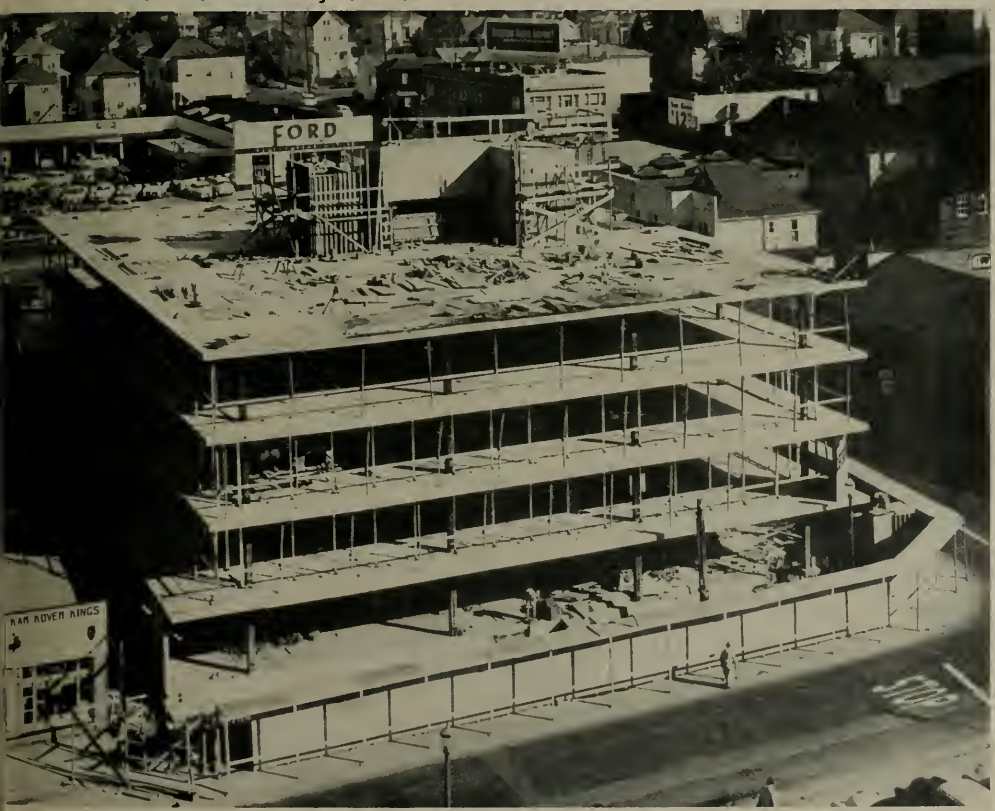
Back in 1950, two aggressive young men joined forces with the idea of becoming "big time" in commercial construction. They were Herbert H. Hastings and Edward L. Martin. They decided to call their firm Bay Shore Construction Company because they selected Berkeley, California, as their headquarters, and their office is situated so that they look squarely out to the Golden Gate of San Francisco Bay.

They were not satisfied just to "bid" jobs. They felt that construction projects could be "sold." Their concept of modern construction has paid off. They now have several million dollars worth of jobs on their construction agenda.

They have capitalized on the advantages that can come from using modern construction techniques. One of their main talking points is the handling of all complexities involved in the erection of a structure for the owner from the time the first shovel of dirt is turned to the day when the key is put in the lock for the grand opening.

As an outstanding example of their idea of construction the new Tioga Office Building in Berkeley stands as a monument. It has blazed a new trail in construction ideas in the area. It is a $1,000,000 project, attractive in design and unusual in construction procedures.

TIOGA BUILDING with floor slabs in permanent position ready for installation of exterior glass walls.



Man standing on cantilever to indicate the maximum of window use.

TIOGA BUILDING:—No. 1 shows floor slabs tied into central core of building; No. 2, lift-slab method in progress. Second floor is in position, floors above are to be lifted to their permanent positions; No. 3, Heavy steel collars, cast in slabs, are welded to supporting columns; No. 4, Joe Parisi (left), job superintendent, and Edward Martin, who, with Herbert Hastings, is owner of Bayshore Construction Co.

Lift-slab construction was used with green tinted, heat-absorbing exterior glass walls between cantilevered projections. This gives a super-abundance of natural light for the occupants. There are only two minor solid walls to obstruct an all-points view.

As an example of the unusual thought that has been put into the details of construction, a window washer can hang a bos'n chair from a concealed rack in each cantilever and propel himself around the entire face of the building. It is estimated that the extra cost of this overhang will be offset in three years by reduced maintenance expenses.

The Tioga Builling is the first multi-lift slab structure to be built in the San Francisco Bay Area. The lift-slab operations were performed by the Vagtborg Lift-Slab Corporation. The method involved the pouring of concrete at ground level of all the floors and the roof slabs of the structure. A thin film of waterseal was applied between each slab section. The slabs were approximately 9 inches thick.

Cast in each slab were 300-pound steel collars through which passed the 12-inch square steel columns.

After all of the slabs were cast on top of each other pancake style, a start was made at the top slab in lifting and thence working down for each succeeding one.

N ENTRANCE to the attractive building, showing modern hollow hular doors with identification push plates.

Each was raised by hydraulic screw-type jacks mounted on top of each vertical column. As each slab reached its permanent position the steel collars were sealed to the columns.

The advantages claimed for the lift-slab method are numerous and consist of the elimination of costly form work: the casting of floor slabs made easier and faster; greater use of a cantilever overhang for design effect; equipment and material can be carried as each floor section is raised; finishing work, partitions and other interior activities can be done on the lower floors while lifting operations are still continuing at higher levels.

In the case of the Tioga Building the bottom of each slab was made completely smooth to permit the placement thereon of acoustical tile. In this particular building the use of capitals or drop panels was eliminated. The size of the building and the type of lifting equipment used limitel the number of columns to twelve in each section of floor lift.

The second, third, fourth floor and roof slabs were lifted in two sections which were separatel by a central core system, thus the total number of slab sections lifted was eight, each one being approximately 57 feet by 95 feet and weighing approximately 315 tons.

Architecturally the Tioga Building is unique when compared with others in the area. One of the outstanding features is the flexibility in room arrangement and the high daylight factor available. There are no exterior walls in the building except the small one near a set of exterior stairs in the rear of the building and the walls on the property lines at the first floor only.

The other exterior walls are of glass with aluminum frames. Permanent walls are entirely confined to the

SPACIOUS LOBBY showing interesting and unusual stair treatment.

central core of the building. The stringent earthquake requirements of the area made it essential that the walls of the central core be of cast-in-place concrete. This heavily reinforced core is attached to the floor slabs by welding of the reinforcement and poured-in-place strip.

The glass is heat absorbing and the drapes are made of fiber glass.

Because of the unusual architectural design, only one-eighth of the building is devoted to storage space. Of the twelve supporting columns only two of the interior ones interfere with useable floor space.

UNUSUAL treatment of column with aluminum wrap-around cover, wood planting box, and modern hollow tubular entrance doors with cross-hatched push plates.

To capitalize on view of garden, architect John Loran Reynolds separated kitchen-dining areas by low divider wall.

WESTERN DESIGNED

KITCHENS

By ARTHUR W. PRIAUX

Servantless living has necessitated an entirely new approach to family life for many thousands of westerners and at the same time has exerted a powerful if subtle influence on contemporary home design.

Without servants, living is more informal, so kitchens, for instance, are being used more and more in the old-fashioned sense as family gathering places. Architects have extended themselves to give kitchens star billing in a great majority of the homes they design. Actually, kitchens have become one of the most exciting and attractive rooms in the modern home.

Today's kitchen is warm, inviting and colorful and generally it is roomy enough with its adjoining eating space or keeping room so the family can lounge here without a feeling of being crowded. An effort is being made to get away from the sterile, hospital-white look which is too apt to creep into kitchens with their heavy expanse of white porcelain appliance fronts.

Architects are licking this problem by using more natural wood in kitchens and by intelligent use of some of the bright new colors.

Even in the large kitchens, space is important and the well-designed headquarters for cooking becomes

a miracle of compactness and engineering. Architects and prospective home owners could save themselves a great deal of time and costly changes if they would make a minute study of the way they want their kitchen to work for them and how they want it to save them extra work. It can be dimensionized and custom-built to meet the most careful specifications. When conveniences are not available, it is possible to build them. In fact, one of the reasons many architects are using wood more liberally in their kitchen designs is because of its flexibility in meeting the unconventional demands. Since people are not standardized why should kitchens be standardized.

Step saving is important to the housewife who is on her feet all day. So, every architect has the traffic matter uppermost in his mind when he starts on a

Warmth and charm of natural finished red cedar combined with brick gives kitchen in home of Franklin W. White, Portland, a distinctive touch. Jas. C. Gardiner, Architect.

BELOW—Step-saving handiness predominates kitchen in Norman Richords home, Cottage Grove, Oregon, designed by architect Thomas Balshizer.

AT LEFT: Elaborate kitchen in the Cy Goldberg home, Longview, Washington, designed by architect Lawrence Rice, has every modern device yet is compact and unencumbered.

SNACK BAR (below): helps mark off work areas in the Jock Kerr home, Eugene, Oregon, and keeps childree out of the cook's way. John Stofford, Architect.

kitchen design. It is possible to create a kitchen of standard size so compact that a woman can stand in a three-step area and prepare an entire meal.

Basically, the several separate functions of meal preparation and serving should be considered as a fundamental of kitchen design and arrangement and the architect can be of considerable help to his client if he will explain these basics.

Sink or special vegetable washing tray should be close to refrigerator and cooler. Canned food storage should be but a step away from an ample work surface. Baking supplies and utensils should be concentrated. All tools and utensils used for cooking should be compactly stored in stacked storage within fingertip reach. Surface cooking units, wall ovens and conventional ranges should be located so that food can be transferred directly to work surface for serving and work surface can do double duty as a pass cupboard to dining area. Some compact kitchens use counter eating surfaces which can double as work surfaces when needed.

There seems to be a revival of the kitchen table, especially one that rolls around, and the handy work surfaces can contain an amazing assortment of storage space beneath, with even a chopping block and tough work surface combined. They can have the same architectural quality as bulletin cupboards and walls in the kitchen if made of the same species of lumber. These movable tables can provide storage for china, kitchenware and a file of trays with silver drawers above. They can be moved close to the sink, stove or pass area to the dining nook.

Some interesting architectural possibilities have opened up as a result of combining kitchen with informal family headquarters. Many of these rooms have been designed with fireplaces in the old keeping

Kitchen range and work area in the home of Mrs. Orlo Bagley, Cottage Grove, Oregon, provides turns in center of kitchen to save steps.

A "home" for the housewife in the corner of the kitchen features the Barney McPhillips home in McMinville, Ore. (Illustrated at left). George Whittier of Whittier & Freitsch, Architects.

BELOW: Where room is plentiful, kitchen work area plentiful, kitchen work areas require careful planning, as shown in the Barney McPhillips residence.

room tradition. Bringing of exposed brick installations into the kitchen has invited multi-use of this brick as a base for wall ovens and as an attractive combination with wood.

Combination of brick and wood, with the texture of each of these materials highlighted, provides endless opportunities for design departure from the conventional kitchen. Designers are using wood more in its natural color, finishing with clear rez and wax, in an effort to capitalize on the informality of this natural material. The beauty of wood and brick in combination is being rediscovered. The combination of copper on wood and brick is another opportunity.

The modern kitchens are actually living kitchens and the challenge for the designers today is to develop rooms where the family will actually enjoy living.

In the Franklin W. White home in Portland, Architect James C. Gardiner has created a kitchen-living room which combines many facets of interest for this family (see page 17, top). A stained Douglas fir ceiling with rafters exposed sets the pace of informality. Natural finish western red cedar has been used for builtins, cupboards, wall buffet and shelving in attractive combination with a brick wall which houses barbecue pit, wall oven and a surface range unit with handy storage cabinets built in the brick wall just above the floor level. The brick chimney which serves the barbecue pit and houses the wall oven also contains a blower unit and copper pans against the brick capture a flavor of the past. This room has a warmth and friendliness which is typical of the well-planned kitchen-living rooms of today. Clever use of native woods and brick is the key to the atmosphere of cheerful informality.

The Norman Richards home in Cottage Grove, Oregon, designed by Architect Thomas Balshizer has an exceptionally well-planned kitchen-dining area arrangement which opens directly into a much larger family room. A peninsula containing a surface range unit is the key to planning in this kitchen (see page 17, bottom). Food passes directly from this peninsula which separates kitchen and dining space. Above the peninsula is a suspended cupboard which contains dishes on the dining side and condiments and

This simple kitchen in the John Wirtz residence, Longview, Washington, has nearly every modern improvement yet is included in a low-cost house.

other utensils and supplies needed for cooking are accessible from the kitchen side. These two units have been finished in clear west coast hemlock with rez and wax and the warm tones of these woods give brightness and cheer to these two rooms.

In the Cy Goldberg home in Longview, Washington, Architect Lawrence Rice has designed a most unusual kitchen. This twin-peninsula room is remarkable because it successfully combines so many activities of the family without appearing to be cluttered. One peninsula contains sink and disposal and dishwasher. Another contains flat range unit and both have large work surfaces of monometal (see page 18, top). On the wall connecting the peninsulas are three wall ovens, a refrigerator unit with special doors to match the oven and extending from counter height upwards. On the opposite wall is a barbecue pit with a door right beside it opening onto a patio. A tiny office desk adjoins a row of floor cabinets with ample work surface and wall bulletin cabinets above. Along a window facing the inner garden of the home is a four-stool, counter-high dining area. All cabinets have been designed of birch which contrasts with a wallpapered ceiling.

Not all modern kitchens have to be costly affairs with special-built equipment. Mr. and Mrs. Willis Croni, Portland, have designed an ingenious honeymoon kitchen in an area about six by eight feet which contains not only the minimum basics demanded of a kitchen but some unexpected frills (see page 24). The kitchen is a cul-de-sac separated from the dining area, which is in one end of a large open area living room, by an attractive counter with a small service top. The counter actually looks like a fancy fence and a small swinging gate adds to this illusion. The kitchen walls and cabinets and counter have been built of eight-inch wide Douglas fir panel boards with a V pattern and the entire lumber portion of the room has been painted a soft white. Compact wall storage cabinets utilize every inch of space.

Architect John Loran Reynolds of Eugene has designed a spacious, livable and extraordinarily attrac-

In the Maurice E. Myers home in Eugene, Oregon, designed by Hamlin & King, architects, the compact kitchen and utility room is a model of space utilization for maximum use.

tive kitchen-dining room in the B. S. Cole home. Picture windows extending the full length of the dual-function room open onto the family's lovely garden. Kitchen is designed in conventional U-shape with the range contained in an extended peninsula which divides the two rooms (see page 16). The peninsula top comes up to the window ledge thus giving a sweeping view of the garden from any part of the kitchen-dining room. Storage for linen, silverware and glassware is amply provided in the room divider. This kitchen-dining room is made of white pine.

A most interesting kitchen which has a spacious appeal yet is amazingly compact was designed for the Barney McPhillips family of McMinnville, Oregon, by George Whittier of Whittier and Fritsch, architects. This kitchen is actually a work area separated by functional counter-top builtins from the wing of the home which contains utility area, breakfast nook and home office (see page 20, top). A feature of this unusual kitchen is the very large area of work surface which surrounds both the sink and the range on opposite sides of the kitchen area (see page 20, bottom). This open area wing of the McPhillips home is large, but an interesting use of color over the west coast hemlock cabinets, walls and woodwork breaks up the separate use areas effectively. For instance, the hemlock in the kitchen has been rubbed with a sage green color, then waxed, while the dining area has been finished in a coral. Darker green gives the utility room corner its own distinctive personality.

Mrs. Mary Dittebrandt has one of the most functional, yet attractive, kitchens in Portland. Architect John K. Smeed created a narrow, streamlined cooking headquarters (see page 23), which answers the need for step saving but does not sacrifice any storage space nor needed equipment and appliances. The secret in the design solution in this kitchen was to arrange all functions of the kitchen to revolve around the range surface unit and the sink, the two busiest parts of any kitchen. These are arranged along one wall, facing outside windows. A large work top separates the range unit from the sink and a dishwasher adjoins the sink. Beneath are storage cabinets for all utensils. Less used oven wall units are on same wall but to the end. Opposite range, in this six-foot wide kitchen, is the refrigerator surrounded on both sides by work surfaces. Baking supplies, utensils, breadboard are concentrated in and around small work counter opposite ovens. A dining area opens directly into the kitchen and is a family loung-

A "Pullman" type kitchen in the home of Mrs. Mary Ditterbrandt of Portland, has been designed by architect John K. Smeed to reduce idle steps to a bare minimum.

ing spot during and after meals.

A client-planned kitchen which is outstanding for its simple functionalism was designed by Mrs. Orlo Bagley of Cottage Grove, Oregon. Feature of this rather interesting cooking area is a center unit comprising range and work surface with storage compartments on two sides which swivels (see page 19). Also emphasized are storage compartments that are stacked instead of the utensils. Sliding drawer compartments which permit added hanging space for pots, spoons and hanging equipment slide out of limited areas.

The John Wirtz home in Longview, Washington, contains a two-wall kitchen made of Douglas fir cabinets and cupboards which is unique for its simplicity and compactness. A wall oven has been built into the upper and lower level of cabinets right beside a surface range unit (see page 21). This is a handy kitchen in a low-cost home which is attractive and functional and meets the need for a step-saving work area for the part-time housewife who works away from home.

An example of designing a kitchen-dining area to suit the needs of the family is well illustrated in the Jack Kerr home in Eugene conceived by Architect John Stafford. This family has small children and snack time is all the time, which means that a kitchen would be constantly cluttered. Stafford handles this by designing a storage compartment room divider between kitchen and dining area so that it serves as well as a snack bar (see page 18, bottom). Stools on the dining side accommodate children who do not have to come into the kitchen. Built on a hollow square principle, the Kerr kitchen is noted for the utilization of storage space beneath work surfaces. Another room divider separates utility room and has compartments for laundry handy to both kitchen, dining area and utility room.

The Maurice E. Myers home in Eugene, designed by Architects Hamlin and King, demonstrates the versatility of new design trends in the kitchen area of the home. In a semi-open area home, these architects have combined a kitchen and utility room with considerable imagination to get maximum space utilization. The kitchen is compacted onto two walls with a peninsula at right angles to the wall with the range forming a divider between work areas. This peninsula has a large work surface with storage beneath on the kitchen side. A tiny sink at the end can be used for hand laundry or vegetable cleaning (see page 22). Washer and dryer back up to the peninsula and are separated by a small, low non-functional back bar from the kitchen. This is the ultimate in condensation.

The modern kitchen is certainly reminiscent of pioneer days when family and guests alike gravitated to the kitchen to dine, converse and join in the meal preparation, not to mention after-dinner dishwashing.

The casual charm of early Americana continues to have as much appeal to our atomic-aged families as it did for our forebears. One of the reasons for the renaissance in use of wood in the modern kitchen is this reawakened interest in the functional kitchen-family rooms of the past. It is much easier to capture the particular flavor of the past when wood is used for the unduplicated texture and character of wood had much to do with establishing the charm and character of those olden kitchens and keeping rooms. The renewed interest in brick and copper in the kitchen traces to the same source.

By combining Early American atmosphere, color and character with all the new appliances and devices to make cooking easier, the architect has created rooms of remarkable livability with all the delights and hominess of informality. Efficiency is the watchword in the modern kitchen, that much is certain, but the designer has still been able to get that proper touch of nostalgia: copper highlights against wood, open hearth, old brick.

Tiny kitchens can also have beauty as well as maximum utility in a compact space, as shown here in the Willis Croni home in Portland.

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The new J. C. Penney Company Store for Sacramento will consist of a basement and five floors, ground level and above, comprising some 96,000 square feet of floor area.

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Construction is scheduled to commence in September.

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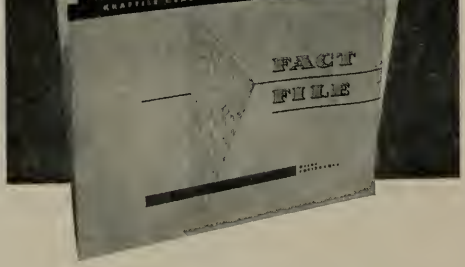

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OREGON CHAPTER

The regular meeting was observed at the Regional Conference at Glacier National Park, Friday, Saturday and Sunday, September 9, 10, 11.

Architects of the Northwest attended the annual Conference, held this year in Montana.

COAST VALLEYS CHAPTER

Mrs. Geraldine Knight Scott was the principal speaker at the September meeting held in Hals Restaurant, Palo Alto.

Mrs. Scott, well known for her landscape architecture on the Peninsula, spoke on the subject of a recent trip to Japan. A number of well selected, colored slides were shown in conjunction with the discussion.

SCHOOL ARCHITECTS HOLD CONFERENCE

A panel discussion on school construction costs, sponsored by the Biulding Industry Conference Board, was held in the Italian Room of the St. Francis Hotel, San Francisco, on September 22.

Malcolm Reynolds, Oakland architect, served as moderator of the panel which was comprised of John Lyon Reid, architect, San Francisco; Michael Pregnoff, Structural Engineer, San Francisco; and James Dent, superintendent of the Mt. Diablo School District, Alameda county.

Discussions covered the basic subject of school construction cost controls, as applied by the state and

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Producers' Council — Northern California Chapter (See Special Page)

school districts on the one hand, and the construction industry on the other.

PASADENA CHAPTER

As in past years, the Autumn general meeting consisted of a steak fry, and was observed this year at the home of Architect Kenneth A. Gordon, in Altadena.

The business meeting dispensed with, those in attendance were treated to an interesting motion picture.

CALIFORNIA COUNCIL OF ARCHITECTS CONVENTION

The 10th annual convention of the California Council of Architects at Santa Barbara, October 5-9, will offer five days of technical sessions, banquets, dancing, and entertainment.

Professional discussions will start on Thursday afternoon, October 6, with a forum on "Should Architects Advertise," and major activities will conclude on Saturday evening, October 8 with the traditional Producers' Council Sportsmen's Dinner.

A large delegation of architects, their wives and guests are expected to be in attendance.

WAL OF PASADENA

The first fall meeting was held September 29th, at the home of Mrs. William Ainley in Monrovia. The program comprises a Book Review.

WASHINGTON STATE CHAPTER

"Zoning: An Architect's Dilemma" was the subject of the September meeting held in the Sorrento Hotel, Seattle, and centered around the freshly revised Seattle Zoning Ordinance. Following a five year study, and rewriting five times, the City Planning Commission submitted the proposed legislation for architects discussion prior to its going to the City Council for adoption.

Merrill Rich served as moderator.

Results of the annual election showed Lloyd J. Lovegren was elected as president to serve the Chapter for the ensuing year. Other officers included: James J. Chiarelli, 1st vice president; Harold W. Hall, 2nd vice president; John L. Rogers, secretary; Albert O. Bumgardner, treasurer; and directors Robert L. Durham, Robert H. Dietz, J. Emil Anderson, and Carl F. Gould.

FULBRIGHT AWARDS IN ARCHITECTURE

Young American architects have a chance to study abroad during 1956-57 under the U. S. Government international educational exchange program. Make application to Institute of International Education, 1 E. 67th St., New York City.

RECEIVES ARCHITECTS HIGHEST AWARD

Ivan Mestrovic, Syracuse, N. Y., world renowned sculptor and painter, was awarded the Fine Arts Medal from the American Institute of Architects.

The award, the highest honor the Institute can bestow in the fine arts other than architecture, was presented to Mestrovic by C. Storrs Barrows, F.A.I.A., and chairman of the Awards and Scholarships for the A.I.A., for "his tremendous contribution to the field of sculpture and painting."

WITH THE ENGINEERS

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AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco

I. C. Steele will be the speaker at the Section meeting on October 18th, and will discuss "Egypt and the Aswan Dam."

Mr. Steele made three trips to Egypt in 1953 and 1954 acting as consultant to the Egyptian government as a member of the International Commission of Consultants.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

"Current Policies an Problems in the Development of our Water Resources," was the subject of a paper delivered at the September meeting by Colonel F. H. Falkner, Engineer, Headquarters Sixth Army. Col. Falkner graduated from West Point in 1928 and received his master's degree from the University of California in 1932. Prior to his assignment as Sixth Army Engineer, he was Resident Member of the Board of Engineers for Rivers and Harbors in Washington, D. C.

New members of the Post include: Robert F. Black, Fred G. Breining, Wm. M. Crozer, Maj. A. M. Del Giorno, Lt. Col. R. U. Downie, Ens. G. J. Fehlhaber, Maj. James B. Grieb, Gene H. Gordon, Gordon B. Higham, M. J. Matovich, J. O. Mauborgne, Gerald Melone, Peter F. Menou, Col. A. E. McCollam, Capt. Leon Nadolski, Lt. Col. K. L. Rudser, Maj. S. W. Smith, L. P. Springmeyer, Maj. Wm. E. Vaughn, Jr., Stephen A. Wallace, Col. H. B. Watkins, Maj. H. Scot Wilson, and Cdr. B. M. Wolfe.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

"Operation Que, F. C. D. A.," was the subject of a program presented at the September meeting held in the Rodger Young Auditorium in Los Angeles on September 7.

Elmer A. Peterson, general manager of Rocklite Products, Inc. was the principal speaker and discussed the effect of a 38 Kiloton A-Bomb on Survival City, an experiment recently conducted on the Nevada desert.

Peterson, a member of the SEOSC, was an official project consultant at Qperation Que on the construction of four houses—two of monolithic concrete and two of concrete block. He illustrated his remarks with color movies and slides.

Recent new members joining the SEOSC, which now has a grand membership of more than 500, include: Mihran S. Agbabian, Robert R. Gunny, W. T. Hamlyn, Morris S. Pynoos, and Robert R. Schneider, Associate; Richard A. Parmelee, and William N. Sorbo, Junior; Quentin Rust, Affiliate; and Robert C. Adolphe, Joseph H. Castler, and W. A. Leichtfuss, Member.

FEMINEERS

The September meeting of the San Francisco Femineers, held in the Elks Club, featured a "Bazaar" with various members donating items under the heading of sewing, painting, gardening, baking, and a surprise "grab bag" and white elephant Chinese Auction Sale.

All proceeds of the event were applied to the Scholarship Fund which goes to an engineering student at the University of California each year.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Everything is in readiness for the Annual Convention of the Structural Engineers Association of California, which will be held at the Ahwahnee Hotel in Yosemite Park, October 6-8.

The Technical Program will include Structural Engineers of national prominence discussing late developments and research in the fields of "Thin Shell Roof Structures," Charles S. Whitney, Consulting Engineer, Amman & Whitney, New York and Milwaukee, featured speaker.

"Engineering Failures," Jacob Feld, Consulting Engineer, New York, speaker; "Recent Developments in

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors, J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Sec.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Sec'y—548 S. Spring St., Los Angeles.

Structural Engineers Association of
Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Sec'y-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Sec'y, 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military
Puget Sound Engineering Council
(Washington)
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American Society Testing Materials
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H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
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Engineering Seismology," Professor Perry Byerly, University of California, speaker; "Development of Plastic Design on Structural Steel," by Professor Lynn Beedle of Lehigh University; "Maintenance Considerations in Original Design," Commander Wallen, Bureau of Yards and Docks, U. S. Navy, speaker; and "Legal Aspects of Engineering" and "Blast Design" are other scheduled discussions.

Entertainment will be highlighted by an "Amateur Night" when engineers will surprise with unsuspected talents. A Costume Ball, Cocktail Party, and Annual Banquet will round out the program.

AMERICAN SOCIETY OF CIVIL ENGINEERS—Los Angeles

A joint meeting with the Structural Engineers Association will be held Wednesday, October 12th in the Rodger Young Auditorium, Los Angeles.

Gilbert E. Morris, superintendent of buildings, and Harold L. Manley, assistant Chief of Building Division—Conservation and Rehabilitation, Los Angeles Department of Building and Safety, will be the principal speakers.

The subject of the joint meeting will be "Slum Clearance and Rehabilitation of Residential, Commercial, and Industrial Buildings in the City of Los Angeles." A 20-minute film in color will be shown.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"Research in Engineering at the University of California" was the subject of a program presented jointly with the East Bay Structural Engineers Society on Tuesday, September 6th, in the Athens Athletic Club in Oakland.

Speakers included Frank Baron, Professor of Civil Engineering; Jerome M. Raphael, Associate Professor of Civil Engineering, and Ray W. Clough, Associate Professor of Civil Engineering, University of California.

An overall picture of the analytical, experimental and design research program of the University was given with amplified and specific illustrations of experimental work in concrete and other structural materials, and with illustrations of current work in the effects of shocks and vibrations of structures.

LOW COST CONSTRUCTION

MORNINGSIDE HIGH SCHOOL

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Ground was broken recently for ten additions totaling 115,168 sq. ft., and costing $1,539,000, to the Morningside High School in Inglewood. According to Theodore Norby, Inglewood Unified School District superintendent, the low over-all square foot building costs of $12.15, represents the lowest in the district history, but will not sacrifice quality construction and sound functional design.

The economy in construction has been accomplished through careful planning and design by school specialists, Balch, Bryan, Perkins and Hutchason, architects, and the school district staff. When complete the entire plant will have a capacity of 1500 students.

Included in the facilities is a 1,000 seat auditorium, 1500 seat gymnasium, indoor swimming pool 42′ x 75′; cafeteria, commerce unit, arts and crafts unit, library and 17 classrooms.

The classrooms are grouped in building units. One of the units with five classrooms, and washrooms, will cost only $7.80 a sq. ft., while classroom costs on a California State average are $9.95 a sq. ft., when arts and crafts rooms are included.

The fully equipped auditorium will be built for $12.00 a sq. ft., and the 110 by 110 foot gymnasium with folding bleachers, foyer and washrooms, will cost a little over $13.00 a sq. ft.

This low gymnasium cost is in spite of specifications which include a floating hardwood play floor, an electric scoreboard, glass basketball backstops and all the latest accessories.

In addition, coaching staff lighting problems have been minimized in the gymnasium by the exclusive use of artificial lighting day and night. This is both a practical improvement and affords a savings in window and skylight construction costs.

Square foot construction costs also have been kept.

QUALIFIED CONTRACTORS FOR CALIFORNIA WORK

State Architect Anson Boyd reports the Division of Architecture has 478 contractors on record recently, who were qualified to bid on state building projects.

Boyd estimated the group represented an estimated combined bidding capacity of $726,700,000.

Contractors counted in the summary relate only to those who are prequalified with the California state department of public works to do work on the division's capital construction program, and does not include those who bid on work under the jurisdiction of the University of California or on public school buildings.

NEW HEADQUARTERS LIONS DISTRICT 4

Lions International, District 4, which includes California and Nevada, have moved into a new $20,000 office building in Santa Barbara.

Architects Robert Hoyt and Glen G. Mosher of Santa Barbara designed the new building which is located in the West Cabrillo Beach area.

ARCHITECT SELECTED

The architectural firm of Skidmore, Owings & Merrill, San Francicso, has been commissioned by the Utah Construction Company to draft plans and specifications for construction of a new community development to be located in southern Alameda county.

The project will comprise a number of residences and a completely modern shopping center.

AIRLINE ENGAGES ARCHITECT FIRM

The Braniff International Airways has commissioned the planning, architectural and engineering firm of Pereira & Luckman to conduct a complete industrial engineering survey and analysis of the airline's requirements in the Dallas area and to design new maintenance facilities.

The airline recently signed a 30-year agreement with the city for the lease and construction of a new 36-acre maintenance base at Love Field at a cost not to exceed $4,000,000.

Nicholas Boratynski, director of industrial design for Pereira & Luckman, will supervise the project.

OFFICE BUILDING

The architectural firm of Gromme, Mulvin & Priestly are completing plans for construction of a new office building in the city of San Rafael.

The new building will be 3-stories in height, will contain 13,500 sq. ft. of floor area, and will be of structural steel frame and reinforced concrete construction.

SC OFFERS COURSE ON REGIONAL PLANNING

With the start of the 1955-56 term, a new graduate course leading to the degree of master of science in city and regional planning will be offered by the University of Southern California.

The new degree, which will require a minimum of one year of graduate study, will be awarded jointly by the School of Architecture and the School of Public Administration.

"The development of this new curriculum fulfills a long-felt need in Southern California," said Milton Breivogel, director of the Los Angeles County Regional Planning Commission and a member of the faculty for the new program.

Simon Eisner, who with Dean Arthur Gallion, Architecture, authored a book on The Urban Pattern, and a well known planning consultant, will offer a six unit core course in planning. Others taking part in the new program include Gordon Whitnall, F. Robert Coop.

COLORADO MOTEL

Herman Fidler of Los Angeles is preparing drawings for construction of a 120-room, frame and wood siding Motel in Grand Junction, Colorado, for the Western States Construction Company.

The building will have a composition roof, concrete slab floors, central heating and cooling system; a restaurant, with dining room to seat 400 persons, cocktail lounge, banquet rooms, and swimming pools are also included.

ADMINISTRATION AND CAFETERIA

Architect John W. Bomberger of Modesto is completing drawings for construction of a new Adminstraton and Cafetera building near Stockton for the California Walnut Growers Association of Los Angeles.

The proposed 7,000 sq.ft. building will be of reinforced concrete tilt-up construction with a wood roof and will cost an estimated $400,000.

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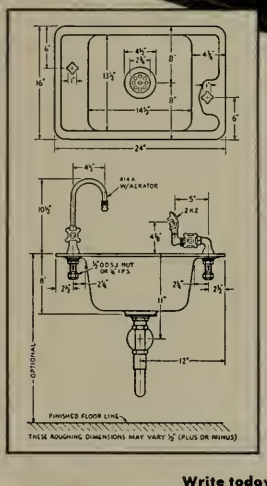

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PERSONALITIES

ROBERT HYLE THOMAS, Architect
Apple Valley, California

ROBERT HYLE THOMAS
Architect

Robert Hyle Thomas was born January 20, 1910, in Los Angeles; attended public schools there and graduated in 1934 from the University of Southern California, School of Architecture.

Following graduation he worked with Allen G. Simple, Beverly Hills; he later was employed by the firm of Albert C. Martin, Los Angeles, and subsequently became affiliated with the architectural firm of Kistner, Curtis, Wright.

Early in the 1950's, Thomas associated as a partner in the firm of McFarland, Bonsall & Thomas and offices were established in Apple Valley in the Mohave Desert, where a great deal of work was being done.

From his Apple Valley office, Thomas has participated in numerous projects receiving nation-wide attention: Bank of Apple Valley, the Terri Lee Doll Factory, the Paxton Truck Terminal of Fontana; St. Mary's Academy, School and Convent at Apple Valley, office buildings, residences; the Victor Valley Shopping Center; associate architect on the St. Mary's Desert Hospital, and many schools, commercial buildings and industrial projects.

His hobbies are painting, golf, and extolling the many advantages of the Apple Valley area.

Field Trip
Clay Brick & Tile
Association

Architects G. F. Ashley and Charles F. Strathoff (left-right) of San Francisco, "test" reinforced brick bench, one of the special exhibits at the Kraftile Co. plant at Niles, California, scene of the Sixth Annual Field Trip and Barbecue of the Clay Brick & Tile Association on Saturday, August 20, 1955.

The 360 guests included architects, structural engineers, city building officials, representatives of the State Department of Architecture, masonry contractors and brick layer officials.

SCHOOL PLANNING CONFERENCE

(From page 9)

operation costs were excessive. The educational consultants, MacConnell & Odell, recommended that the community abandon all of the eight schools and construct four new schools located differently to serve the community needs. The community got behind this recommendation whole-heartedly and did vote bonds for the construction of these four new schools. Concurrently, detailed educational planning was done by the consultants, the school staff, and the architect. Complete educational specifications were given to the architect prior to a preliminary planning of the plants. Construction has started on these schools which were planned carefully on the basis of the educational program for that community.

Richmond, California, jumping from 25,000 people in 1940 to 120,000 in 1943; was forced into double, triple, and quadruple shifting. It was assumed that with the end of the war people would return to their original homes. However, in 1952 there were still 100,000 people in Richmond and elementary school enrollment was approximately 19,000. Development of Richmond's master planning, which must provide for a total population in excess of a quarter million, involves a balancing of residential areas with sufficient commercial and industrial areas to provide the necessary base for employment and support of the commu-

LOW COST CONSTRUCTION

MORNINGSIDE HIGH

(From page 30)

in line in the design of the indoor swimming pool which will have the added convenience of 400 balcony seats, and overhead doors opening onto a beautiful, walled-in patio for community use during school vacation periods.

Other specifications included in the pool are overhead aluminum acoustical decking, diatomaceous earth pool filters with power cut diagonals in the concrete pool deck, making it virtually non-skid. The well known swimming pool expert, C. P. L. Nichols of the Los Angeles City Park and Recreational Department is consultant on the pool development.

Construction of the auditorium and gymnasium will be pre-cast, reinforced tilt-up concrete panels, tapered steel girders and acoustical steel decking. Other units will be of reinforced brick and wood frame.

The cafeteria will be equipped with an interior and exterior public address and sound system for dances, electioneering, or pre-game athletic rallies. A student store and lounge are parts of the cafeteria.

Between the cafeteria and gymnasium there will be a large rally court, which will become a definite student center area.

All units are accessible from covered walks along a gently sloping mall which opens onto four large social courts where smaller student groups may gather. The buildings are layed-out on the inside, or enclosed campus principle, instead of the usual finger-type plan.

This layout makes possible student circulation and gathering within the perimeter of the building group, when school is in session, a factor which educators long have considered as the ideal campus arrangement.

PICTURE CREDITS—United States Steel Company, cover; Affiliated Photographers, Page 3; Stanford University, Page 6, 7, 8, 9; Hainlin Studios, Page 10, 11, 12, 13, 14, 15; Photo Arts Commercial Studios, Page 16, 18 (top), 20 (bottom), 21, 22; West Coast Lumbermen's Ass'n, Page 19, 20 (top), 23 and 24; Robert B. Liles, Page 25.

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nity functions and facilities. This master planning has involved the coordination of all those facilities that an urban area will need.

Cooperation among all of the affected agencies makes it possible for the school department to keep abreast of population changes asd to evaluate the trends in enrollment for each of the planning areas in the Richmond Union High School District. The job that is now facing the school department is that of translating these enrollment projections into facility needs and to evaluate the financial ability of the districts for meeting these needs.

Master planning for the LaMesa-Spring Valley School District, as presented by Glenn E. Murdock, superintendent, and M. Ted Dixon, associate superintendent, requires a systematic and thorough survey. Professional services for school district planning should be utilized either from the school administration staff or from qualified educational consultants working with the staff. A qualified person is a sound investment in that he can save considerable money through systematic analysis of growth problems. The planner must understand the physical characteristics of the area within the school district boundaries. It is essential that he work closely with other community agencies. He must determine the ultimate growth capacity of the district and must chart the direction of growth. In order to do this it is necessary to review constantly the total community situation. There must be careful designation of attendance areas based largely on administrative and board policy and tempered by general topography, traffic hazards, transportation factors, etc.

Pupil enrollment projections must be made and constantly revised. Based on the foregoing considerations, school site selection and purchase should be carried on at an early date.

An area of interest for school planners is that of economies in long range planning. James Tormey, superintendent of schools, San Mateo county; A. H. Glantz, coordinator of business advisory services in the San Mateo county superintendent's office, and Emil te Groen of the Cambridge Tile Manufacturing Company and Frank Cox of the Kawneer Company, talked mainly of the aspects of this problem. Emphasis was laid on the difference between economical building and cheap buildings. The real cost of school buildings is the initial cost plus maintenance during their expected period of life. Utilization of cheap materials is not justifiable if it results in a material increase in the long range plant cost. It must be remembered, however, that economy cannot alone dictate the building program; rather, all planning must be from a program standpoint and buildings cannot be judged adequate or inadequate unless on the basis of their service to the educational program.

School lighting was discussed in considerable detail by Paul S. Schmidt of General Electric Company and John Walsh of Pacific Gas and Electric Company. Mr. Walsh discussed the amount of light required for different kinds of visual tasks. High school and junior college classrooms should be designed for a minimum of 50 foot candles since many of them are used for adult education. Because of close visual work and poor contrast, sewing and drafting rooms need an absolute minimum of 50 foot candles. Actually 75 to 100 foot candles is now standard practice for drafting room design in engineering and architectural firms and there is no reason why educational institutions should have lower standards. It is essential, Mr. Walsh continued, to provide careful brightness control and generally to reduce brightness ratios. A third major area of concern in school lighting has to do with color which makes possible an interesting, instead of an institutional, environment.

Paul Schmidt demonstrated a wide variety and range of light bulbs and tubes which are useful in obtaining desirable visual environments of these kinds of materials and quite often lighting can be improved materially by a simple change to a newer type bulb or tube which provides better light without any change in fixtures or wiring.

The proof of adequate educational planning for school plants is in the actual plant as constructed. A field trip to Hillsdale High School, San Mateo Union High School District, San Mateo, California, led by

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John Lyon Reid, architect, presented concrete evidence of an educational program as it was solved by the architect. This school, one of the most talked of schools in the United States today, has received wide national publicity because its unique toplighting with light-directional glass block. However, there are many other educationally interesting features to the plant which does provide the flexibility and expansibility dictated by the program. Other visitations were made to outstanding schools in San Carlos, Sunnyvale, and Walnut Creek.

Trends in acoustical treatment of schools was presented by William White of the Owens Corning Fiberglas Corporation. To quote, "In order that our school plants be such that it is easy to learn and, accordingly, easy to teach, the proper control of sound is most essential. Without a satisfactory acoustical environment and good hearing conditions a classroom is like an engine with two spark plugs failing to spark. It cannot be used effectively or efficiently for purposes for which it is intended. Rooms with poor sound quality—with too much noise or too little noise—not only retard the learning processes, but also cause undue mental and physical fatigue. It becomes a challenge to school planners to provide a satisfactory acoustical environment and to take advantage of the corollary benefits of acoustical materials to attain a better, more permanent, and safer school facility at a cost commensurate with building budgets as well as the long range educational needs of the community."

Detailed consideration was given to modern science equipment by Paul DeH. Hurd, assistant professor of education at Stanford University; Warren Pelton, assistant professor of education at Bowling Green State University, Bowling Green, Ohio, and L. W. Smack of E. H. Sheldon & Company. Trends in planning science facilities, as in the case of other facilities in the school, are largely dependent on defining the educational program and interpreting the needs of this program into physical facilities.

Elementary school furniture and storage equipment of a type and kind that would adequately serve the elementary school program was considered by Jennie Wahlert, director of Nursery School, Washington University, St. Louis, Missouri; Daniel T. Dawson, assistant professor of education at Stanford University, and Robert McKee, elementary school principal, San Lorenzo Valley Unified School District, Boulder Creek, California.

Business education, as it is rapidly becoming keyed to actual business practice in commerce and industry, was the point of departure for the business education discussion by Fred S. Cook, acting assistant professor of education, Stanford University; Russell Kent, lecturer in education at Stanford university, and Jon S. Peters, educational consultant, School Planning Laboratory, Stanford University. In order to plan a business education program it is necessary to study the community needs and patterns so that the instructional program does, in fact, relate to reality.

The last few years has seen a change in the definition of physical education programs. More and more such programs are being geared to the needs of all of the children. Formerly the physical education program was built around an incidental piece of equipment or a play field. Today equipment, play fields, and facilities are dictated by the educational program as was well pointed out by John Nixon, assistant professor of education and physical education, Stanford University, and Harold J. Cornacchia, director of physical education, health and recreation, Modesto Public Schools, Modesto, California.

N. E. Zavalishin, Jr., of W. P. Fuller & Company pointed out that recent developments in color can contribute materially to the interest and life of the total educational environment. There is no reason why schools should be "institutional" in character since it is possible to use interesting and tasteful decoration schemes and still retain an excellent visual environment.

Francis Noel, chief, Bureau of Audio-Visual Education, California State Department of Education, indicated that the audio-visual materials are playing an increasingly important part in the modern educational program. However, since their Bureau's test of daylight screens indicate that such were not totally satisfactory for all projection uses, it would be neces-

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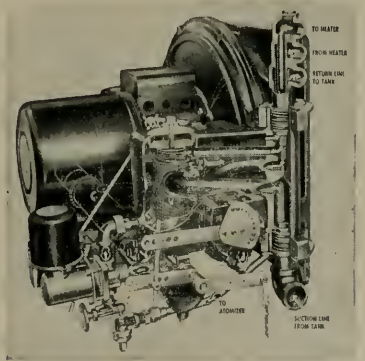

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sary to plan for classroom darkening in all new school construction.

In the past the administrator and architect would develop plans for a school building entirely independently of any educational program. That this situation has changed was inlicated by Tallie Maule, architect; Mario Ciampi, architect, and Robert J. Stoffer, assistant superintendent of buildings and grounds, San Francisco Unified School District, San Francisco, California. The primary function for both the architect and administrator is to provide the best possible facilities for the educational program.

The role of the administrator in school planning, as defined by Professor William R. Odell of the Stanford School of Education, is dependent on a definition of the roles of all groups who are concerned with school planning. For the most part the superintendent serves as an over-all coordinator and educator who brings together all possible forces to insure as much education and as much involvement of all people as possible. Other concerned individuals and groups include state departments of education, educational consultants, certified and non-certified staff, the school board, the students, the parents, and certain lay groups.

Paul R. Rivers, chief of the division of school planning, California State Department of Education, discussed health aspects of school house construction. "The State has no greater responsibility than that of providing the best schools that it can afford for its children."

Mr. Rivers considered detailed aspects of site selection, school planning, the building generally, the classrooms, and the common-use areas. "Building a school from the selection of the site to the last nail, brick, or brushful of paint is an important operation and should involve consultation with competent consultants, teachers, physicians, health personnel, city and county planners, zoning authorities, and engineers."

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WALTER J. LONG RETIRES FROM CALIFORNIA JOB

Walter J. Long, senior structural engineer in the California State Division of Architecture, will retire on September 1, according to an announcement by Anson Boyd, State Architect.

Long has worked for the Division under four State Architects and six chief structural engineers during a period of over 44 years.

AMERICAN SOCIETY FOR TESTING MATERIALS

Claire H. Fellows, director, Engineering Laboratory and Research Dept., The Detroit Edison Company, Detroit, was elected president of the ASTM for the ensuing year at the annual meeting held in Atlantic City.

Other officers named to serve with Fellows included: R. T. Kropf, vice president; F. L. LaQue, A. Allan Bates, John C. Moore, and E. F. Lundeen, directors.

ARCHITECT WILLIAM H. HARRISON GETS INTERNATIONAL RECOGNITION

Architect William H. Harrison, AIA, has been accorded international recognition for his design of the El Rancho High School of Whittier, California, a project that received a national award last year.

Latest recognition comes from Mexico where a feature on the school appeared in one of the country's architectural magazines.

ARCHITECTS NAMED FOR LOS ANGELES MERCURY PLANT

Smith, Hinchman & Grylls, of Detroit have been appointed architect-engineers for the huge new Mercury automobile plant to be erected in the Los Angeles area, according to C. F. Reith, vice president and general manager of the Mercury Division.

Mr. Reith revealed that the new plant will contain approximately 1,300,000 square feet substantially larger than Mercury's present Los Angeles plant. It will be located on a 200 acre site four miles east of the present plant and will be completed in 1957.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THE HARD-SURFACE FLOOR-COVERING INDUSTRY —A Case Study of Market Structure and Competition in Oligopoly. By Robert F. Lanzillotti. State College of Washington Press, Pullman, Washington. Price $4.00.

This is the first work to assemble a body of comprehensive data on the hard-surface floor-covering industry, and the author has included a great deal of information of value to management for market analysis and forecasting. Seller concentration, pricing practices, price determinants, and interfirm price relationships, profits, investments, factors influencing location of producers, conditions of entry into the industry and many other factors are discussed.

The results of investigations will be of interest to floor covering manufacturers, professional economists, and all those concerned with public policy towards business enterprise.

ELECTRO-TECHNOLOGY. By M. G. Say, Ph.D.M.Sc., M.I.E.E. Philosophical Library Inc., 15 E. 40th Street, New York 16, N. Y. Price $6.00.

This book presents in concentrated form the electro-technical basis of the phenomena which are important in light and heavy electrical engineering. An introductory section deals with conduction and magnetic and electric field effects, and a comprehensive list of definitions, with the rationalized m.k.s. system of units being used throughout. Second part of the book gives a complete guide to the handling of circuit problems. Two-terminal and four-terminal cases are dealt with, and balanced and unbalanced three-phase circuits. Comprehensive, the book is clearly written; valuable as textbook and reference for practicing engineers.

THE ARCHITECTURE OF JAPAN. By Arthur Drexler. The Museum of Modern Art. 11 W. 53rd St., New York. Price $6.50.

Two-hundred and twenty-eight pages. Deals with the relevance of traditional Japanese architecture to modern western building, as well as the development of Japanese architecture from pit dwellings to contemporary dwellings. A 25-page supplement on the Japanese house shown at the Museum of Modern Art during the summer of 1954 and 1955 is included. Three main sections are devoted to the environment and religious beliefs that have influenced Japanese art, traditional principles of structure and design, and buildings the Japanese themselves consider masterpieces.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Air conditioners. New three color illustrated bulletin describes the new low-height American Blower self-contained floor-type air conditioners for commercial class installations; discusses construction, operation and maintenance for five air conditioner sizes from 3 to 15 tons capacity; selection table included which lists data covering cabinet dimensions, specifications for compressors, fans and filters, normal conditioner capacity and nominal CEM ratings for each size. For free copy write DEPT-A&E, American Blower Corpn, Detroit 32, Mich.

Stud welding method. Architectural details illustrating use of the stud welding mehod of fastening to reduce cost of spandrels and window-wall installations are shown in a folder just published; also shows typical installations and illustrates the fastening details on the Equitable Life Assurance Building, San Francisco; Denver Mile High Center Office Building; U. N. Secretariat building, and San Francisco Municipal Airport Building. Copy available write DEPT-A&E, Gregory Industries, Inc., Lorain, Ohio.

Hot water heating. A new semi-technical bulletin available to plant engineers interested in the problems of large scale hot water heating; spells out the exact nature of the problem involved in "big-swing" hot water loads and also explains why conventional storage type systems, of either "open" or "closed" type, are inherently unable to fully solve these prob-

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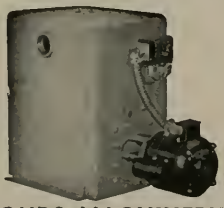

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lems; fuel savings and other advantages also discussed. Copy available. Write DEPT-A&E, Fred H. Schaub Engineering Co., 2110 So. Marshall Blvd., Chicago 23, Ill.

How to reduce corrosion protection costs. How to get greater coverage from protective coating at lower costs in safeguarding pipe, pipe joints, fittings and couplings is described in a new brochure just off the press; covers story of new coar tar coating in tape form with extra thickness to provide double wrap protection from single wrap application; table of coverages. Avaliable by writing DEPT-A&E, Tapecoat Company. 1523 Lyons Street, Evanston, Ill.

Air conditioning explained. Six-page booklet describes new line of year-around air conditioner in non-technical terms for architects and builders; discusses simple operation of unit air conditioning system, its flexibility and adaptability, installation and operating economy, low space consumption, quiet operation and low maintenance; full color photo's show typical installations, and sizes. Copy available. Write DEPT-A&E, Trane Company, La Crosse, Wisconsin.

Home ventilating fans. New booklet (A.I.A. File No. 30D1) gives easy to understand description of high velocity home ventilating fans for kitchen, laundry, rumpus, or bathroom use; includes installation detail, drawings, and specifications, as well as a lot of valuable information for architects, engineers, contractors and builders. Copy available. Write DEPT-A&E, Simpson Co., 1060 East 11th Street, Oakland, California.

Parking in the air with steel. New 24-page brochure contains pictures and descriptions of steel framed parking structures and brief technical section to aid in the plan and design of parking decks; points out low cost, re-usability and speed of erection, which means quicker return on parking operator's investment; compiled by American Institute of Steel Construction, Inc., 101 Park Ave., New York 17, N. Y.

Industrial fibers. Newly published brochure gives physical and chemical properties and potential application of "Palco" industrial fibers; illustrated to show varied texture of the new four fibers. Copy available. Write DEPT-A&E, Pacific Lumber Co., 100 Bush St., San Francisco 4, California.

The ceiling that works for you. New booklet (A.I.A. No. 31F290, 31F21 & 3981) describes Acusti lighting, equipment and acoustics. Many illustrations shown of industrial, commercial installations, both interior and exterior; includes charts, drawings and formulas; detailed description on specifications and recommended units. Write for free copy DEPT-A&E, Luminous Ceilings, Inc., 2500 W. North Ave., Chicago 47, Ill.

Ornamental metal work. Catalog No. 7 just released (A.I.A. File. No. 15) contains detailed data on stock elements for the fabrication and assembly of ornamental metal work; 124 pages, illustrating over 2500 architectural metal items in color to identify type of metal. Indexed. For copy write DEPT-A&E, Julius Blum & Company, Inc., Carlstadt, New Jersey.

Space control in school buildings. New folder just issued shows how movable walls are currently being used throughout the nation in schools and universities to cope with surging enrollment, shifting curricular patterns and changing educational techniques; includes floor plans and description of sound control feature. Copy available. Write DEPT-A&E, The Mills Company, 980 Wayside Road, Clevelanl, Ohio.

Highway guard-rail lighting. New 12-page, illustrated catalog describes highway guard rail lighting; shows application and use on highways, freeways and bridges and contains data on load deflection, elasticity and joint and tensile strength characteristics; specification and technical data included, together with numerous charts and graphs. Write for free copy, DEPT-A&E, Rheem Mfg. Co., 4361 Firestone Blvd., South Gate, California.

Sealing bituminous paving on low traffic areas. A new 4-page, 3-color bulletin explains need for sealing bituminous paving in such areas as walks, drives, parking lots and playgrounds with cold applied asphaltic compound; available in colors of red, green or black. provides a colorful moisture-tight and non-abrasive surface for pavements. Get copy by writing DEPT-A&E, American Bituminous & Asphalt Co., 200 Bush St., San Francisco 11, California.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dempcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull brass plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Meduse White, Calaveras White ..... 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.62

Aggregates—Haydite or Basalite
¼-inch to ⅜-inch, per cu. yd $7.75
⅜-inch to ½-inch, per cu. yd 7.75
No. 6 to 0-inch, per cu. yd 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $1.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	¾x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390.00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass ..... $ .30 per □ ft.
Double Strength Window Glass ..... .45 per □ ft.
Plate Glass, ¼ polished to 75 ..... 1.60 per □ ft.
75 to 100 ..... 1.74 per □ ft.
¼ in. Polished Wire Plate Glass ..... 2.50 per □ ft.
¼ in. Rgh. Wire Glass ..... .80 per □ ft.
⅛ in. Obscure Glass ..... .44 per □ ft.
3/32 in. Obscure Glass ..... .63 per □ ft.
⅛ in. Heat Absorbing Obscure ..... .54 per □ ft.
3/32 in. Heat Aborbing Wire ..... .72 per □ ft.
⅛ in. Ribbed ..... .44 per □ ft.
3/32 in. Ribbed ..... .63 per □ ft.
⅛ in. Rough ..... .44 per □ ft.
3/32 in. Rough ..... .63 per □ ft.
Glazing of above additional $.15 to ..... .30 per □ ft.
Glass Blocks, set in place ..... 3.50 per □ ft.

HEATING—

Furnaces—Gas Fired
Floor Furnace, 25,000 BTU ..... $ 70.50
35,000 BTU 77.00
45,000 BTU 90.50
Automatic Control, Add 39.00
Dual Wall Furnaces, 25,000 BTU 91.50
35,000 BTU 99.00
45,000 BTU 117.00
With Automatic Control, Add 39.00
Unit Heaters, 50,000 BTU 202.00
Gravity Furnace, 65,000 BTU 198.00
Forced Air Furnace, 75,000 BTU 313.50
Water Heaters—5-year guarantee
With Thermostat Control,
20 gal. capacity 87.50
30 gal. capacity 103.95
40 gal. capacity 120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft..... $64.00
(2") Over 1,000 □ ft..... 59.00
Cotton Insulation—Full-thickness
(3½") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m..... $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m..... 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft..... 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square. $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $3S per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds..... $45.50
Standard Ribbed, ditto..... $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Raw	Wholesale Boiled
Light iron drums..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square..... $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square..... 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square..... 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top..... $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M..... $240.00
Standard, 8-in. per M..... 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft..... $1.50
Vented hip skylights, per sq. ft..... 2.50
Aluminum, puttyless.
(unglazed), per sq. ft..... 1.25
(installed and glazed), per sq. ft... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when cut of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs..... $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs..... 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs..... 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs..... 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)..... 7.15
1 in. & up (Less than 1 ton)..... 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜"..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft..... $ .65
Rubber tile, per □ ft..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Krattile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M..... $139.50
6x5½x12-inches, per M..... 105.00
4x5½x12-inches, per M..... 84.00

Hollow Tile—
12x12x2-inches, per M..... $146.75
12x12x3-inches, per M..... 156.85
12x12x4-inches, per M..... 177.10
12x12x6-inches, per M..... 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(21)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINOLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE NALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.175	3.175	3.175	3.175	3.175	3.175	3.125	3.125	3.175	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	cZ2.835	BZ2.86	oZ2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	EZ2.785	EZ2.785	EZ2.785	EZ2.785	EZ2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	FZ2.61	FZ2.61	FZ2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	HZ2.16	HZ2.16	HZ2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.375	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	Z.875	Z.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.17	3.17	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
O $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	7½cw		10cw		7½cw
								½%PROM					
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	11½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%PROM				

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table 1.

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

WILLIAMS HIGH SCHOOL, Williams, Colusa county. Williams Unified School District, Williams, owner. Frame and stucco construction; 11-classrooms, administration, home making, gymnasium, shops, cafeteria, kitchen, shower and locker rooms, toilet rooms; 34,000 sq. ft. of floor area. $462,244. ARCHITECT: Barovetto & Thomas, Sacramento; GENERAL CONTRACTOR: Pacific Company, Berkeley.

CONVALESCENT HOME, 20-beds, Modesto. Mrs. Jessie Martin, Modesto, owner. 1-Story, concrete block and frame construction, asphalt tile floors—$42,712. ARCHITECT: G. N. Hilburn, Modesto. GENERAL CONTRACTOR: Morris E. Williams, Modesto.

DIAGNOSTIC CHEMISTRY BLDG, Atomic Energy Laboratory, Livermore, Alameda county, U.S. Atomic Energy Commission, Oakland, owner. 1-Story, 46x68x14 ft., concrete slab floors, radiant heating, structural steel roof, air conditioning — $102,000. GENERAL CONTRACTOR: Bay Cities Constn Co, Oakland.

CHURCH, San Jose, Santa Clara county. Second Church of Christ Scientist, San Jose, owner. Frame and stucco construction $75,368. ARCHITECTS: Higgins & Root, San Jose. GENERAL CONTRACTOR: Wayne Pendergraft, Cupertino.

MEDICAL BLDG, Pacoima, Los Angeles county. Ervin H. Holvey, Van Nuys, owner. 2-Story frame and stucco and concrete block, stone veneer, medical building; 13,000 sq. ft. floor area, built-up roof, asphalt tile, concrete slab and terrazzo floors, plaster walls and ceilings, toilets, electrical work, dark room, pharmacy, sheet metal, plate glass, air conditioning. ARCHITECT: Jack Chernoff, Los Angeles. GENERAL CONTRACTOR: J. B. Lilly, North Hollywood.

SCAVENGERS SHOP BLDG, San Francisco. Scavengers Protective Ass'n, San Francisco, owner. Reinforced concrete and frame construction; shop and administration building and four truck shelters—$461,841. ARCHITECT: Phillip D. Tomasello, San Francisco. GENERAL CONTRACTOR: Cahill Bros. San Francisco.

MANUFACTURING BLDG, Van Nuys, Los Angeles county. Sam and Ray Vaccarello, Van Nuys, owner. 1-Story reinforced concrete, composition roof, concrete floors, interior plaster, four 20-gallon gas water heaters, toilets, insulation, skylights, tapered steel girder, office space, brick planter boxes; 55x240 ft—$30,000. ENGINEER: John P. Jamison, Paramount. GENERAL CONTRACTOR: Hanson Constn Co, Paramount.

PINE GROVE SCHOOL ADD'N, Crescent City, Del Norte county. Crescent Union School District, Crescent City, owner. 3-Classroom, kindergarten, toilet room addition to present school building, frame construction—$80,000. ARCHITECT: Ernest F. Winkler, San Francisco. GENERAL CONTRACTOR: Scott, Wheelon, McSweeney & Menery, Crescent City.

INSPECTION STATION, Yuma, Arizona. Arizona State Highway Commission, Yuma, owner. 2-Pumice block buildings, paving, scale pits—$52,400. GENERAL CONTRACTOR: Mardian Constn Co, Phoenix, Ariz.

RECTORY, Westchester, Los Angeles county. Roman Archbishop of Los Angeles, owner. 2-Story, 14-room frame, plaster and brick rectory at St. Anastasia Parish; composition and rock roof, hardwood, linoleum and ceramic tile floors, plaster walls and ceilings, steel sash, forced air heating, fireplace, plumbing, electrical, garbage disposal, dishwasher and asphalt paving. ARCHITECT: Barker & Ott. Los Angeles. GENERAL CONTRACTOR: Alex Sutherland, Monrovia.

SHOPPING CENTER, San Mateo county. Parkside Plaza Company, San Francisco, owner. Comprising group of facilities for super market and stores: 1-story reinforced concrete tilt-up construction, wood roof—$2,000,000. ARCHITECT: Wayne A. Littlejohn, Orinda. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

LANDSCAPE MANAGEMENT FIELD HEADQUARTERS, University of California Davis Campus, Yolo county. University of California, owner. 1-story, 4,500 sq. ft. in area greenhouse and lath house; 5,000 sq. ft. in area greenhouse and lath house: concrete floor slab, open web steel joists, built-up reinforced steel sash, plywood interior walls, resawn exterior siding—$111,986. ARCHITECT: Kitchen

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87 Walton Street, Atlanta, Ga.

& Hunt, San Francisco. GENERAL CONTRACTOR: Lawrence Construction Company, Sacramento.

BEAUTY SHOP, Puente, Los Angeles county. Virginia's Beauty Shop, Puente, owner. 1-Story, frame and stucco building, 16x69 ft., composition roof, plate glass windows and glass panel door, concrete slab and asphalt tile covered floors, acoustical ceiling, security steel sash, space heater and toilet rooms. ARCHITECT: Zacha & Associates, Puente. GENERAL CONTRACTOR: R. D. Bentley, Inc., Puente.

BANK BUILDING, The California Bank, Reseda, Los Angeles county. The California Bank, Reseda, owner. 1-Story frame, stucco and stone masonry bank building. ARCHITECTS. Stiles and Robert Clements, Los Angeles. GENERAL CONTRACTOR: L. E. Dixon Company, San Gabriel.

WAREHOUSE, Oakland, Alameda county. Airport City Corpn., Oakland, owner. 1-Story reinforced concrete tilt-up construction, wood roof and roof trusses, concrete floors; 30,000 sq. ft. floor area. GENERAL CONTRACTOR: Stolte, Inc., Oakland.

GYMNASIUM, High School, Glenn county. Glenn County Union High School District, Willows, owner. Frame and stucco, steel frame building for high school at Elk Creek; 60x70 ft.—$35,368. ARCHITECT: Clayton Kantz, Redding. GENERAL CONTRACTOR: Thomas W. Lisota, Redding.

RESTAURANT, Gorman, Los Angeles county. James L. Ralph, Gorman, owner. 1-Story reinforced brick Caravan Restaurant: composition roofing, concrete floor, cork and vinyl tile, ceramic tile, acoustical tile, painting, plastering, plumbing and air conditioning. ARCHITECT: Eugene Kinn Choy, Los Angeles. GENERAL CONTRACTOR: Russ Ketcham & Son, Van Nuys.

MORTUARY, Napa. Claffer & Rota, Napa, owners. 1-Story frame construction, wood exterior, some brick veneer—$32,420. ARCHITECT: Beland & Gianelli, Vallejo and Napa. GENERAL CONTRACTOR: J. H. Vienop, Napa.

HIGH SCHOOL ADDN., Tracy, San Joaquin county. Tracy High School District, Tracy, owner. Frame and stucco construction; 4 commercial rooms, study hall, science laboratory, library, shops, cafeteria, kitchen, boys anl girls shower and locker rooms, physical education facilities, swimming pool and toilets—$942,000. ARCHITECT: Falk & Booth, San Francisco. GENERAL CONTRACTOR: Rubino & Gullickson, Stockton.

MEMORIAL SWIMMING POOL AND BATH HOUSE, Sonora, Tuolumne county. Tuolumne County Association, c/o arcritect, owner. Concrete block and frame construction — $54,000. ARCHITECT: Burnos Schroder, Palo Alto. GENERAL CONTRACTOR: Jesse C. Wagoner, Modesto.

SOCIAL HALL, Presbyterian Church, Westminster, Los Angeles county. Board of Trustees, Presbyterian Church, Westminster, owner. 1-Story frame and stucco hall; asbestos shingle roofing and some composition roof, concrete slab floor, steel sash, forced air heating, kitchen area, brick fireplace, toilet facilities, electrical and plumbing. ARCHITECT: Frick & Frick, Pasadena. GENERAL CONTRACTOR: J. Raymond Dunham and Johnston Bras., Westminster.

THEATER AND STORE, Moraga, Contra Costa county. Donald L. Rheem, owner. 1-Story reinforced concrete and structural steel frame, wood roof; 16,000 sq. ft. floor area, seating capacity 1,000 persons—$366,472. ARCHITECT: Cantin & Cantin, San Francisco. GENERAL CONTRACTOR: Christensen & Lyons, Oakland.

SCANDINAVIAN ELEMENTARY SCHOOL, Fresno. Scandinavian Elementary School District, Fresno, owner. Frame and stucco construction; administration room, 18 classrooms, 2 kindergartens, multi-purpose room and kitchen, and toilet rooms — $508,980. ARCHITECT: Coats & Metz, Fresno. GENERAL CONTRACTOR: R. Pedersen & Sons, Fresno.

SCHOOL BLEACHERS, High School, Lemoore, Kings county. Lemoore Union High School District, Lemoore county, owner. Work consists of two projects, installation of bleachers at the athletic field and a toilet rooms building—$69,550. ARCHITECT: Alastair Simpson, Fresno. GENERAL CONTRACTOR: R. G. Fisher, Fresno.

RESTAURANT, Los Angeles. Nebb's Restaurant, Los Angeles, owner. Masonry restaurant building; composition roof, concrete slab and terrazzo floors, plaster walls and ceilings, plate glass, air conditioning, electrical, plumbing, and asphalt paving. ARCHITECT: Edwarl H. Fickett, Los Angeles. GENERAL CONTRACTORS: Robert W. Stanhope Company, Los Angeles.

BRANCH BANK, Washington Center, Whittier, Los Angeles county. Bank of America, Los Angeles, owner. Frame and Stucco building — $126,642. GENERAL CONTRACTOR: Secrest & Fish, Whitties.

STORE & OFFICE, San Jose. Bel Schwartz, San Jose, owner. 1-Story concrete block and frame construction, 5000 sq. ft. floor area—$29,331. ARCHITECT: W. E. Blessing, San Jose. GENERAL CONTRACTOR: Robert A. Fletscher, San Jose.

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IN THE NEWS

ELKHORN VILLAGE SHOPPING CENTER

Architect Lawrence W. Gentry of Los Altos is completing drawings for construction of a super market and seven stores in the Elkhorn Village Shopping Center in West Sacramento, California.

The building be of 1-story frame construction with heavy mill type wood exterior and shake roof; concrete floors, and will contain 35,000 sq. ft. of floor area. Estimated cost is $300,000.

ARCHITECTS FOR STERN HALL WING ADDITION

The architectural firm of Wurster, Bernardi & Emmons of San Francisco has been selected by the Board of Regents of the University of California, to design an addition to Stern Hall on the Universtiy of California campus in Berkeley.

TRADE ASSOCIATION ORGANIZED ON COAST

The Sliding Glass Door and Window Institute, a trade organization to service architects, builders, contractors, decorators and the home minded public, has been formed on the West Coast, with Charles Morearty, Los Angeles manufacturer, being named president.

RICHARD M. GERBER APPOINTED BY KAISER

Richard M. Gerber has been appointed manager of the building products department of Kaiser Aluminum & Chemical Sales, Inc., according to an announcement by John E. Menz, general sales manager of the firm.

Gerber will handle national sales and promotion for Kaiser Aluminum building products.

HOSPITAL RESEDA

Davis & Ferguson, architects and engineers of Van Nuys, are completing plans and specifications for construction of an 18-bed reinforced brick hospital in Reseda for the Reseda Community Hospital.

The building will be of wood frame with some structural steel, composition roofing, concrete slab floors, and asphalt paving.

LUTHERAN CHURCH

Architects Arnold and Francis Constable of Sausalito have completed drawings for construction of a new Church for the Lion Lutheran Church of San Francisco.

The new Church will be of reinforced concrete construction with wood roof trusses and wood roof, and will cost an estimated $100,000.

LAS VEGAS SHOPPING CENTER

Architect Ira Marshak of Las Vegas, Nevada, is completing plans for construction of the first unit of a shopping center to be built at Twin Lakes on the Tonopah highway.

SUPER MARKET

Architects Corrough & Wong of Stockton are completing plans for construction of a super-market building in San Joaquin county for M. Nagashima.

The building will be 1-story, with basement, and of reinforced concrete and frame construction.

ELEMENTARY SCHOOL

Architects Anderson & Simonds of Oakland are completing drawings for construction of the Bidwell Elementary School near Hayward for the La Vista Elementary School District.

The new building will provide facilities for 6-classrooms, administration offices, multi-purpose, kindergarten, kitchen and toilet rooms.

Construction will be frame and stucco.

ARCHITECT SELECTED

Architect Jack Buchter & Associate of Orinda has been commissioned by the Pinole-Hercules Union Elementary School

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District of Pinole to draft plans for construction of a new Elementary School to be built near El Sobrante in Contra Costa county.

AIRPORT LIMOUSINE TERMINAL BUILDING

Architect Frank Trabuco and Harry Hilp, Sr., are colaborating in the designing of facilities for a central airport limousine terminal building to be built in downtown San Francisco.

The proposed structure will be 2-story's in height, with a basement, and will serve passengers leaving from all airport offices in the city plus hotels and residences for the San Francisco International Airport and at the same time will serve air-passengers arriving in the city.

RESTAURANT AND MOTEL

Architects Armet & Davis of Los Angeles, are completing plans for construction of a restaurant-motel building in Anaheim.

The motel will have four units comprising 200 rooms, a swimming pool, and parking facilities for 375 automobiles. The restaurant will seat 360 people.

AUTO SALES AND SERVICE

Architect Gifford E. Sobey of Los Gatos is completing sketches for construction of a combined automobile sales and service building to be erected in Los Gatos.

Estimated cost is $100,000.

MEDICAL BUILDING

Architect Leo P. Raffaelli of Studio City is preparing drawings for construction of a frame and stucco medical building with living quarters to be built in Reseda, for Dr. S. Firmen.

The building will contain 3000 sq. ft. of floor space; composition roofing, concrete slab floors, toilet facilities, reception room, and offices.

COMMUNITY CENTER AND SWIMMING POOL

Architect Lawrence G. Thomas has completed drawings for construction of a new reinforced concrete swimming pool and a reinforced concrete and wood community center building for the Chico Area Recreation Park in Chico.

HOWARD A. STEVENS JOINS KAWNEER

Howard A. Stevens has been appointed Director of Business Research for the Kawneer Company of Niles, Michigan, according to a recent announcement by Henry W. Zimmer, executive vicce president.

Stevens will assist in making surveys and studies of industries, markets and businesses pointing toward the enlargement of the firm's activities through acquisition of new products or companies.

STORE FOR REDDING

Architect Clayton Kantz of Redding is completing drawings for construction of a new 2-story reinforced concrete and concrete block store building in Redding. The new store will contain 11,500 sq. ft. of floor area.

AUTO SALES AND SERVICE

Consulting engineer H. L. Standefer of Studio City is completing plans for construction of a concrete block automobile sales and service building in Van Nuys.

The sales office and show room will be 60x60 ft., and the service building will be 26x150 ft.

STORE AND OFFICE

Archtiect Hollis Logue of San Jose is completing plans for construction of a combination store and office building to be built in Vacaville.

The building will be of 1-story frame and stucco construction.

RECREATION CENTER

Architects Ponsford & Price of Oakland are completing plans for construction of the Arroyo Viego Reccreation Center to

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be built in the city of Oakland by the city's Recreation Department.

Work will consist of a 1-story frame and stucco building containing recreation rooms, games room, crafts room, and office. It will contain 12,500 sq. ft. of floor area.

DIESEL ENGINE REPAIR SHOP

The Western Pacific Railroad is completing plans for construction of a 1-story structural steel frame and protected material exterior building in Oroville to be used as a diesel engin repair shop.

The building will be 185x240 ft.

NEWEST BENJAMIN LIGHTING UNITS

A new Benjamin lampholder, a metal-clad and metal-back turret type for use with two and three lamp units, is being offered by the Benjamin Electric Mfg. Co., Des Plaines, Ill.

These lampholders are believed to be the only metal-clad, spring-loaded type holder being mass produced that will take the new double contact, recessed base, 800 MA lamp. Is available in industrial and semi-industrial lighting equipment. Write manufacturer for complete data.

SAGE HOTEL BUILDING

Architect Bruce E. Heiser of San Francisco is completing plans for construction of the Sage Hotel in San Jose.

The building will be 2-story, concrete and frame construction with some structural steel. Estimated cost is $2,000,000.

ARCHITECT SELECTED

The architectural firm of Butner, Holm & Waterman of Monterey has been commissioned by the Monterey Elementary School District to draft plans and specifications for construction of an addition to the Fremont Jr. High School at Seaside.

The work will be of frame and stucco construction and will cost an estimated $160,000.

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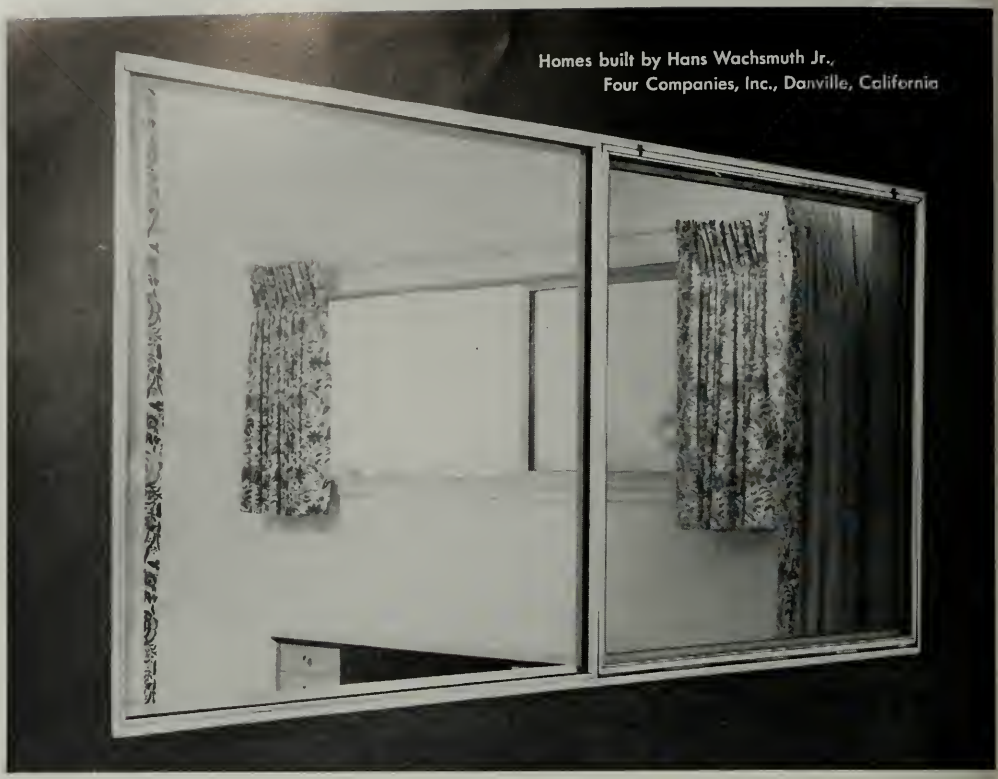

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COVER PICTURE

PHELAN HALL

University of San Francisco's new $1,500,000 residence hall will accommodate 400 men students; also has dining facilities for 1000 persons, several lounges and chapel. For complete story see page 12.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135. — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy, 50c.

. EDITORIAL NOTES .

HOUSES COST MORE

According to the U. S. Bureau of Labor Statistics the average single family house is today costing about $2,500 more than it did in 1950. Partly because building costs have gone up faster than the general price level, and partly because today's house is larger and better built. A good many of the experts believe this trend to higher prices will continue into 1956 because 1) costs of labor, and some materials, are still rising, and 2) more and more home builders are upgrading their speculative houses to tap the fast growing housing market among families whose rising income will permit their buying a much better home than heretofore.

An analysis of costs, based upon the U. S. Department of Labor records adjusted to a 1947-49 base as 100, shows the average wholesale prices of all commodities rose to an average of 110.3 for 1954, whereas the average wholesale prices of building materials climbed to 120.2; hourly wage rates of all building trades workers soared to 136.4, and the U. S. Commerce Department's composite of several construction costs indices went to 121.6.

Predicated on past trends and no seen factor in the nation's economic situation which would indicate a reversal of known factors, it is pretty well conceded that private houses will cost more in 1956.

* * *

Experts predict our living standards will be doubled by 1975, in result of automatic machines.

Where youth is served, where children are protected, where the ill and the troubled are given help and understanding . . . there everyone leads a healthier, happier life.

You help provide these values for your town when you contribute to your Community Chest or United Fund . . . the services it provides make your community a better place in which to live.

United Community Campaigns for voluntary health and welfare services are now in progress all over the United States and Canada . . . Give Your Share . . . Give Gladly, the united way.

BETTER DESIGNED SCHOOLS

The nationwide classroom shortage to be studied at a White House Conference the latter part of next month poses a serious challenge to architects, public officials and school executives, responsible for designing, providing adequate funds, and plant operation.

Unfortunately there is very little time for extensive research and long term planning, as the acute shortage of classroom facilities in a great many communities throughout the nation is an immediate problem and not one to be faced in the future.

Maximum facilities of many school plants are being utilized with dual classes being crowded into classrooms originally designed and intended to serve only a fraction of students now being cared for. And in those fast growing communities where school plants are limited, or even non-existant—as in the case of urban residential development—the problem of adequate classrooms presents a tremendous problem.

Observation in any regional area of the nation, indicates there is a wide variance in building design and utility value. Without question of a doubt, some variations in school plant construction is measured in terms of local economic limitations, while others represent inadequate recognition of the need for stretching the available resources to a maximum in student attendance, a maxmum in school plant use for the dollar expended, and a minimum of maintenance and obsolesence of physical properties.

The conference in Washington will pinpoint attention on a problem that is almost nationwide, and in all probability a good many positive ideas and suggestions will filter back into individual localities where the school classroom problem may be the paramount problem. However, the ultimate solution is going to be settled on the drafting board, in the providing of adequate funds for remodeling, additions, and new construction; and the ability of professionals in the field of education to produce a maximum in student training with a minimum of cost.

In the introduction to a series of articles, which appeared recently in Architectural Forum appraising "where we stand in the art of school design" and describing at some length the school design trends for the future, the magazine summarizes one aspect of the present-day challenge to the design profession by stating: "There will be little time or money ahead for patiently polished gems. But there is a wide, wide, range between gem and junk. It is vital that the schools built in the coming years do not shrill to our shame that they were thrown up in a panic."

Beverly Hilton Hotel

ADDS NEW DIMENSIONS TO HOTEL LIVING AROUND THE WORLD

BEVERLY HILLS, CALIFORNIA

WELTON BECKET, F.A.I.A., & ASSOCIATES,
ARCHITECTS AND ENGINEERS

In the origin, design and construction of the Beverly Hilton, existing standards were put aside as inadequate and new ones established.

Located on one of the most coveted pieces of land in Southern California, the hotel's 8½ acre site was famous long before construction of the building started in 1953. Completed in 1955 at a cost of $16 million, it establishes a new economic standard for hotels.

The Beverly Hilton is a prime example of the architectural system of "total design," the technique of integrating every factor in a building scheme from the shapes of its structural steel to the weave of the carpeting. The technique is exceedingly complex and taxing, requiring long and extensive research and the full range of architectural knowledge, skills and talents.

Basic construction of the building is reinforced concrete, except for the main dining room and ballroom roofs where structural steel was used to conserve weight.

Significant features of the tri-winged exterior are the curving, cantilevered Star on the Roof, thrust from the top story, and on the lobby floor the Bali Room, shaped like a quarter-segment of a circle. The balconies facing the swimming pool are separated by porcelain enamel curtain walls in no discernable color pattern.

Directly involving 2000 men engaged in 55 different trades and employed by 80 different firms, the building was one of the most complex of construction jobs.

NEWS and COMMENT ON ART

PORTLAND ART MUSEUM

The Portland Art Museum, West Park and Madison, under the direction of Thomas C. Colt, Jr., will exhibit the following special items during October and November:

PAINTINGS, recent work by Carl Morris (Oct. 1-23): oils by the noted Northwest painter, who will show at a 1-man exhibition at the Kraushaar Gallery in New York during November and December; Watercolors by Harry Wentz, 40 works by a painter-teacher who has worked in Oregon, especially from Coast scenes, for many years (Oct. 22-Nov. 20); From Portland Collections, an exhibit of objects of art from private colections not previously shown at the museum (Oct. 22-Nov. 27); and Paintings by Women Artist Members, a group of works by women who have exhibited in juried exhibitions at the Portland Art Museum (Oct. 25-Nov. 27).

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thom-

(See page 32)

M. H. DE YOUNG MEMORIAL MUSEUM
Golden Gate Park, San Francisco

THE MADONNA BETWEEN ST. JOHN THE BAPTIST AND ST. GEORGE

By CESARE DA SESTO, Italian School of Lombardy, 1477?-1523

THE SAMUEL H. KRESS COLLECTION

LEASING FIXED ASSETS —

A NEW AVENUE FOR

THE CONSERVATION OF WORKING CAPITAL

By TREVOR A. B. TERNAN,

President, Ternan, Clauson & Company, Inc., Leasing Brokers

Of Significant Interest to Architects, Engineers, Contractors, Vendors, Real Estate Owners and Management Executives.

It is not as yet generally understood by executive management that any firm or individual qualifying credit-wise may now obtain the prompt and unrestricted use of any fixed asset more economically and without any investment at all, by leasing it—instead of buying it.

Leasing is applicable in all industrial, commercial, mercantile and agricultural spheres, on equipment, machinery, fixtures, vehicles, implements and hundreds of different items, including real estate, new buildings and even new store fronts, typewriters and airplanes.

TREVOR A. B. TERNAN, President

In the interests of the reader it is necessary to consider the mechanics and advantages of leasing upon the assumption that the lease to be employed is in fact a True Lease, which is legally sound, and not some system of financing commonly called leasing which under legal interpretation may be construed to be a disguised conditional sales contract.

By leasing through a True Lease, the lessee pays only the monthly rental for the **use** of the asset **concurrently with its use,** meanwhile keeping working capital in hand for more profitable utilization otherwise. Furthermore, a True Lease **legally** qualifies the fixed rental charge as a wholly deductible expense out of gross profits before taxes.

It is the working capital of a business which earns the profits. Hence, thoughtfully evaluating the above factor will reveal to what extent leasing makes it possible for the lessee to conserve working capital.

Everyone will agree that the profits of most businesses are derived from the **use** of fixed assets and **not** from holding title thereto. Leasing provides the lessee the same unrestricted use of the fixed asset which he would have if he purchased it. Today's swiftly moving technological and economic changes make it difficult to prejudge how quickly any fixed asset a business might buy will become obsolete or unprofitable.

To reduce such hazards the business can lease fixed assets for say 1, 3, 5 years or longer and at the termination of the lease return the leased property to the lessor; then under a new True Lease secure immediately as replacement the most efficient type of items available.

Recognized economists predict that during each of the next ten years American business will require new working capital equal to the total of the current national armament budget. Therefore, precious working capital becomes more precious and its retention for more profitable use becomes a serious obligation for management.

Operating statements of leading American industrial concerns for the past five years indicate average annual earnings on working capital to be in excess of 40% per annum, based on Dun & Bradstreet average for last five years.

Since a business deprives itself of the earning power of any working capital used to buy fixed assets, the money so removed costs the average business **40% per annum**—not the rate of interest at which that business **can borrow money from outside sources,** which might be as low as 4%.

Which is better business, or the wiser use of money?

(a) To deep freeze $10,000 by buying a fixed asset, and thus fully prepaying depreciation for years ahead, thereby weakening working capital position . . . in effect leasing to yourself and paying an unreasonable penalty for doing so?

Or

(b) To lease, paying the rental out of a small part of the income derived from the **unrestricted use** of the identical $10,000 item?

It is becoming clearly apparent to an ever increasing number of executives in industry and business that due to the complex mechanics involved in the leasing of thousands of items the services of qualified leasing specialists are as economically sound and imperative as is the employment of an attorney on legal matters.

The designation of Leasing Broker is something of an innovation in the business world, but the unique functionings of such an organization are progressive and comprehensive. Leasing brokers handle all of the clerical work, research and credit analysis, and assume full responsibility for all financial arrangements involved in a lease transaction, and meanwhile representing all parties thereto. They provide a strictly confidential service to clients, and operations must be conducted upon the highest possible plane of integrity regularly appropriate to banking and finance. They arrange for lessors to buy any fixed asset from the vendor for 100% cash, and lease the item to a financially responsible lessee, whether the item be priced at $5,000 or $1,000,000 or more.

A qualified organization arranges leasing transactions tailormade to the needs of the individual business while at the same time protecting the interests of the customer, with all rental being paid directly to a bank, insurance company, or other financial institution.

As long as the lessee does not default in the prompt payment of the agreed lease rental, nothing can happen to the lessor or the financial institutions which could result in the lessee losing the possession and use of the asset during the lifetime of the lease.

Leasing is greatly to the advantage of firms who want to minimize capital expenditures while expanding facilities, replacing equipment, or developing improvements or diversifications.

Suppose a corporation requires a new industrial plant, machine shop, foundry, mill, research laboratory or building; while the corporation might be in a position to pay cash, management, recognizing the importance and necessity of retaining working capital, finds leasing a great advantage.

Leasing brokers must be able to arrange a True Lease to cover the leasing of all assets in **one type of lease**; to arrange for the lessor to buy the land upon which the structure is to be erected, at the price agreed upon; to erect the building needed to the exact specifications and requirements of architects and engineers; purchase and install the industrial, commercial or other equipment as specified and selected by the lessee corporation; fixturize the building, install lights, elevators, heating, air conditioning, sprinkler systems, acoustical ceilings, etc.; completely furnish and equip offices.

If the corporation desires, all fees for contractors, etc., may be included in the total amount of the lease, and all services may be paid for in cash, just as the lessor will have paid 100% cash to all vendors for every item involved in the lease.

A somewhat similar plan of leasing may be applied to firms qualifying credit-wise who have their own buildings and want to modernize with new store fronts, display windows or equipment. Any financially responsible firm can use the advantages of leasing and turn back non-profitable items to the lessor-owner at the end of the lease period, and secure another True Lease on whatever newer type of items may be more beneficial.

There is no longer need for any firm of proper credit standing to drain working capital into frozen assets when leasing brokers can provide "one package" deals for new or existing buildings.

For instance, on hotels, apartments and motels, leasing brokers can arrange to lease all fixed items, from floor to ceiling, and include them in one lease transaction, eliminating for the lessee the maze of bookkeeping and accounting which would be required for separate purchases. The lessee writes but one check a month to cover everything, thereby placing himself in a position of earning his profits in cash and able to pay taxes in cash.

Leasing is also a boon to contractors; they can now lease any fixed asset their business requires, such as aphalt mixing equipment.

The broad range of leasing services is well exemplified in the ability to serve the oil industry by arranging for the leasing of such items as pumping units, tank farms, vapor recovery systems or steel derricks.

Leasing services are applicable to bakers, brewers, distillers, food processors, engravers, farmers, manufactures and many others. You may lease airport equipment, radar, radio and television equipment and towers.

Leasing brokers supervise the transaction throughout the period of the lease, arrange for exchanges or substitutions of equipment for the lessee, and when the leasing period is over find a market for the leased assets or property elsewhere.

People are often misled into believing that leasing is some form of "tax dodge," or that leasing saves taxes. This is not true. There is no tax saving from leasing per se.

A True Lease brings about changes in the tax incidence—i.e., the tax timing. This is of great value and advantage to business enterprises seeking to improve working capital position.

A True Lease makes it possible to calculate taxes based upon cash profits only, thus providing a busi-

(See page 34)

LET'S FACE

GAS VENTING

By ALAN KINKEAD,

President, William Wallace Company

PART I

Like all fuels, gas gives off waste products of combustion when burned. The waste products from burning gas, however, are invisible which perhaps accounts for the past indifference to the problem of their proper disposal. Until recent years the commonly accepted solution was merely to provide a pipe—practically any type would do—as a means of carrying off the vent gases. The results have not been happy for either the home owner, the building industry, or the gas industry. Condensation damage to walls and furnishings, unhealthly room air due to vent spillage, and in some cases serious fires or accidents have proved that the problem of proper venting deserves greater attention. Architects, designers, engineers and contractors—each has a stake in this problem because each shares the responsibility of providing the customer with a home free of hazards to health or property.

Fortunately, this problem has received intensive study in recent years, largely through research conducted by the Metalbestos Division of the William Wallace Company, Belmont, California. The following article, the first of two to be published by this magazine, presents some of the findings and conclusions from this study. It is based on an address presented by Mr. Kinkead to the Domestic Gas Research and Utilization Conference of the Pacific Coast Gas Association and American Gas Association, held in Los Angeles in March, 1954.

Our Gas Industry is this Nation's sixth largest industry. We serve over twenty-seven million customers. (This figure does not include the hundreds of thousands of customers served over widespread areas by the LP portion of our gas industry.) To perform this Herculean task, our industry has invested well over twelve billions of dollars in pipe lines, plant and distribution facilities. The more than 1200 gas utilities and their personnel who daily discharge their individual and collective responsibilities to efficiently distribute Nature's finest fuel are to be commended. In fact, this is so significant and colorful a story that Life (March 10, 1952) and National Geographic (October 1951) Magazines wrote feature stories concerning our tremendous growth and impact!

Like every other industry, we have our growing pains too! While we have done an outstanding job of collection, transmission, distribution and utilization, we seem to have avoided serious consideration of the proper disposal of the products of combustion. It is my opinion that to properly use any fuel, we must know how to use it from start to finish. Apply that statement to other hydrocarbon fuels and you will quickly understand what I mean. In our case it means —from the gas fields to the final disposal of the products of combustion. It is in regard to this final phase that I wish to speak searchingly on the subject "Let's Face Gas Venting."

As things now stand full responsibility for proper venting is left in the hands of our building officials and the only guides they have to go on are obsolete venting codes which, it appears to me, are based on plumbing codes that are good for designing sewers but of little help when it comes to venting gas appliances. In fact adherence to the code often makes it impossible for the vent to work as well as making it more costly.

Obviously, our industry's lack of interest in the subject has quite naturally resulted in CONFUSION!

The following examples will help give an idea of the confusion the building inspector finds himself in due to the fact that the gas industry has not given him guidance.

One of our engineers recently bought a new house in a modern subdivision in Palo Alto. This photograph (Fig. 1) shows the water heater installation and its

Fig. 1: Typical water heater vent.

vent. The vent complies with the local code which requires the use of a Tee. The Tee and the pipe above it are Type B vent material. The connector is Type C. The over-all height of the vent is 3 ft. The owner has this to say about the installation:

> "The flue gases spill continuously at the draft hood. They then condense on the underside of the roof and the condensate follows the slight pitch of the roof in such a manner that it collects and drips to the ground at the main entrance to the house. Many people have had their clothing stained as a result of this condensate dripping on them while they were waiting to enter the house.
>
> "Wherever condensation collects on the underside of the roof large watermarks and stains have appeared."

This vent was replaced with a single piece of 3" Type B vent pipe, 3 ft. long, going straight from the draft hood up through the roof. It now works perfectly even though it violates the local code in two respects. The installed cost of this vent would have been considerably less than the original installation.

The adjoining photo (Fig. 2) is a set-up made in the Metalbestos laboratory. There are no tricks to it. It was designed by known venting laws which predicted it would work. This diagram shows the actual dimensions of the set-up. It violates the usual venting codes in the following respects:

1. The water heater vent is reduced from 4" diameter, the vent collar size, to 3" diameter at the first elbow.
2. It then runs at a steep pitch down hill to the common vent.
3. It intersects the common vent at an angle of 135° to the direction of flow in the common vent.
4. This connector is excessively long.
5. The furnace vent is reduced in size at the draft hood from 6" to 5" in diameter.
6. The common vent has an area of only 70% that of the largest appliance outlet.
7. The common vent is also pitched down hill for part of its length. This vent primes rapidly and works perfectly with both appliances working as well as with each one working alone.

The photo (Fig. 3) shows these same two appliances

Fig. 2: Vent arrangement with seven code violations.

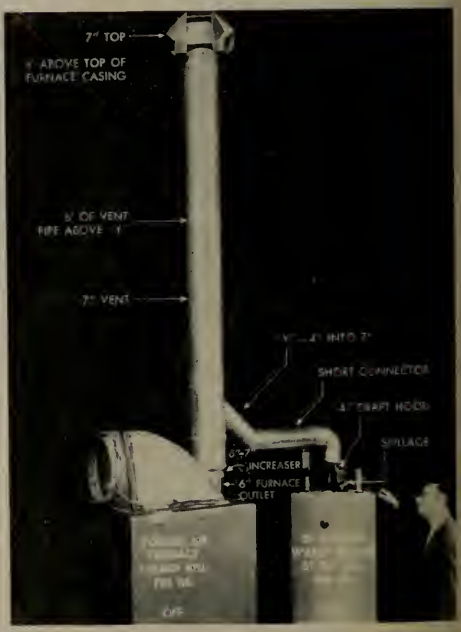


Fig. 3: Vent construction in accordance with building code.

connected to a common vent in strict compliance with so called modern code.

1. The vent connectors are as short as possible.
2. ½" or more upward slope is maintained in the connectors.
3. The water heater connector intersects the common vent at an angle of 45° by use of a "Y" fitting.
4. Both the connectors are the same size as the draft hood collars to which they are attached.
5. The common vent has an area equal to that of the largest connector plus slightly over 50% of the smaller connector.

When the water heater alone is operating **it spills continuously** at the draft hood. You can see this plainly in the photograph. Yet by all codes this vent would be considered perfect.

Typical of present codes is the requirement that a vent connector must intersect the common vent at an angle not to exceed 45°. The two examples just shown indicate clearly that there is no sound basis for this requirement. In many areas making such a connection by means of a 90° Tee fitting is strictly forbidden. The usual argument is that terrific turbulence will be created where the two streams intersect.

This photograph, (Fig. 4) showing a connection which employs a glass Tee, shows that this is not so. There is smooth streamlined flow where the two streams intersect in the Tee. The accompanying diagram (Fig. 5) made from observation of the Tee, portrays this condition very clearly.

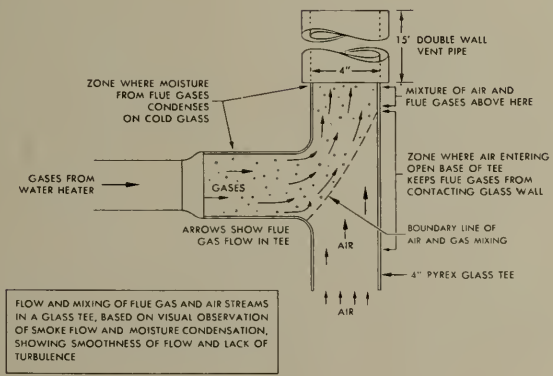
Speaking of Tee fittings, many codes require that the vertical portion of all vents start with such a fitting. When the Tee is capped, our observations show that considerable turbulence is produced, substantially adding to the resistance of the vent. Actually an elbow would work much better than a Tee.

When you consider the outstanding advances made by the gas industry in production, distribution, appliance design and safety controls, it's rather amazing that we've done so little in this other important aspect of "how to use gas."

So much for "where we've been!" The important thing, it seems to me, is "what can we do about our problem?"

(To be concluded next month)

Fig. 4: Showing how condensate inside of open glass tee traps flow of vent gasses.


15" DOUBLE WALL VENT PIPE
4"
ZONE WHERE MOISTURE FROM FLUE GASES CONDENSES ON COLD GLASS
MIXTURE OF AIR AND FLUE GASES ABOVE HERE
ZONE WHERE AIR ENTERING OPEN BASE OF TEE KEEPS FLUE GASES FROM CONTACTING GLASS WALL
GASES FROM WATER HEATER
GASES
ARROWS SHOW FLUE GAS FLOW IN TEE
AIR
BOUNDARY LINE OF AIR AND GAS MIXING
4" PYREX GLASS TEE
AIR
FLOW AND MIXING OF FLUE GAS AND AIR STREAMS IN A GLASS TEE, BASED ON VISUAL OBSERVATION OF SMOKE FLOW AND MOISTURE CONDENSATION, SHOWING SMOOTHNESS OF FLOW AND LACK OF TURBULENCE

F:g. 5.

NEW UNIVERSITY OF SAN FRANCISCO

STUDENT RESIDENCE PHELAN HALL

SAN FRANCISCO, CALIFORNIA

GENERAL CONTRACTOR

BARRETT CONSTRUCTION CO.,

Phelan Hall is the name recently selected for the University of San Francisco's imposing new residence hall which is now being occupied following its completion the latter part of September.

The towering seven-story structure, picturesquely perched atop Ignatian Heights of the USF campus, commands a sweeping view of most of the Bay Area. It was designed to accommodate 400 out-of-town students and was constructed with a Federal self-liquidating loan under the supervision of the U. S. Housing and Home Finance Agency's San Francisco office headed by John F. Lamb, district engineer.

Built by the Barrett Construction Company of San Francisco at a total cost of $1,380,000, Phelan Hall contains an attractive dining room seating up to 1,000; separate lounge areas for each of the seven dormitory floors; coffee shop; library; and a birch-panelled chapel with stained glass windows.

Additional features include a number of small pri-

MAIN LOBBY . . . view from corridor leading to chapel showing stairway to lower level snack bar and lounge. Entrance to dormitory is at left, main dining room at right.

Serving facilities in stainless steel offer cafeteria service to the 500-1000 expected to use the main dining room. Shown at right.

BELOW is main dining room, expected to serve 500-1000 students. Located on main floor, it is finished in natural birch paneling and red asphalt tile flooring.

Reception desk area in main lobby.

vate dining rooms which can be expanded or contracted by folding partitions; a scenic roof garden lounge area, and a sheltered deck arrangement which leads into the main entrance from the parking areas which flank the front side.

A driveway leads directly down into a wide lower level carport permitting students' baggage, kitchen supplies and building equipment to be transferred directly to the freight elevator.

Service in the main dining room is cafeteria-style with students entering into a U-shaped serving area. The spacious kitchen is stainless steel-equipped throughout and strategically situated between the main dining room and the private dining spaces.

Named for the late U.S. Senator James D. Phelan last month on the 25th anniversary of his death, the new student residence will be officially dedicated by civic and University officials on Sunday, October 23, as one of the highlight features of USF's Centennial Year observance.

Title to the new dormitory building, which represents the second unit to be completed under USF's "Second Century" master construction plan, was formally accepted from Federal officers during ceremonies presided over last month by Rev. John F. X. Connolly, S.J., University of San Francisco president, and Rev. William J. Tobin, S.J., president, USF board of trustees.

The first completed unit was the $1,500,000 Richard L. Gleeson Library, considered the most modern structure of its kind in America. Ground-breaking for the third USF modern building unit, the $700,000 War Memorial Gymnasium, is expected to take place early in 1956.

ANOTHER VIEW OF MAIN LOBBY
Shows entrance of the seven story steel and concrete student residence. Walls are covered in gray and green, floors in red asphalt tile, and woodwork is natural finish birch.

Attractive identification signs on Camelback and Central identify center.

UPTOWN PLAZA SHOPPING CENTER

PHOENIX, ARIZONA

By ROY P. DRACHMAN,
Subdivider and Realty Developer

The Uptown Plaza Shopping Center, which formally opened for business on August 25, is probably the only shopping center of any size in the United States which contains exclusively retail stores. There is not a purely service tenant in the center.

The developers, the Del E. Webb Construction Company and Roy P. Drachman, by design leased the 24 stores to retail merchants to provide north Phoenix the type of goods which formerly were found only in the downtown stores.

Uptown Plaza is located at the northeast corner of Camelback Road and North Central Avenue in the heart of the finest residential district in Arizona. Because all kinds of service-type shops, such as barber

TYPICAL PARKING AREA during shopping period. Angle parking with stores of 55 degree prevails; extra wide stall spaces permit ease of entering and exiting from cars.

shops, beauty shops, shoe repairs, opticians, doctors and dentists, are located near the site of Uptown Plaza, the developers felt there was an abundance of this type operation in the neighborhood.

Great selectivity in choosing the merchants for Uptown Plaza was used. Over 350 prospective tenants were interviewed. It was the aim of the developers to provide a well-rounded balance of merchandise so that a shopper, by making only one stop, could satisfy her wants.

An often expressed premise that a shopper "buys in shopping centers, but goes downtown when she wants to shop" does not apply to Uptown Plaza. This new development, as an example, has eight stores which sell ready-to-wear of one type or another in various price categories. There is the Lou Ann Shop, which is a salon-type dress operation, offering middle and high priced party dresses, formal gowns and expensive sweaters; Towne Fashions, which sells middle priced merchandise with a much wider range of dresses

AERIAL VIEW showing arrangement of buildings and parking lot. Location is at the corner of Camelback and Central Avenue. The building at right corner is a popular type restaurant; another dinner-type restaurant in left upper corner of center.

and accessories including costume jewelry; Jerand's, which handles a wide variety of merchandise for women and children as well as shoes; and Given Bros. offers women's wear and shoes in the middle-and-up price range. Given Bros. has 6,000 square feet of space, while Jerand's has 10,000.

Porter's, long recognized in Arizona as the favorite place for men's and women's sportswear and western clothing, has a good-sized store in Uptown Plaza and will find ready favor with tourists who annually trek to Phoenix. Two or three additional smaller shops handle women's wear in various types of merchandise.

An outstanding tenant of Uptown Plaza is Bostrom's. This store, formerly located in a secondary intersection near the downtown area, features all kinds of homewares, sporting goods, hardware, toys, fine crystal and china, and garden supplies. The interior and fixtures of this store were designed by Welton Becket & Associates of Los Angeles, and without doubt is one of the most beautiful homeware stores in America. It contains 16,500 square feet on one floor, and the women of Phoenix are having a veritable picnic browsing among the breath-taking merchandise from all over the world.

Co-starring with Bostrom's at Uptown Plaza are the beautiful McCrary's Pharmacy, which was de-

View of Uptown Plaza looking down esplanade under overhanging canopy. The front supports are artistic as well as utilitarian, adapting themselves for sign covering. Of particular interest is the method of store identification when looking down the esplanade.

JERANDS OF ARIZONA

A wide store front with native stone type bulkhead; island cases permit featuring special merchandise. Doors have special hardware to give full view into the store.

GIVEN BROS.

A ladies' store for dresses and shoes; island showcase permits full display. Treatment at base and top of island case is distinctive. The stone bulkhead for part of store with glass fronting practically to floor in other areas, makes entire interior a show window.

signed by Burke, Kober & Nicolais also of Los Angeles, and the Piggly-Wiggly super market.

McCrary's is one of the most eye-taking pharmacies in the West. This firm has a drug store at another location which it has operated for over 20 years, and carries the finest lines of cosmetics as well as complete pharmaceutical supplies.

The Piggly-Wiggly market contains 22,500 square feet and is said to be the finest grocery store west of the Mississippi with colored fixtures. Instead of the usual white porcelain fixtures found in most food markets, the equipment in the Piggly-Wiggly store is finished in pastel shades. The color combinations on the walls have carried out this same decor.

Two fine restaurants are located in Uptown Plaza. Neither competes with the other since they are entirely different type operations. Navarre's, which opened last February, has already established itself as one of Phoenix's favorite eating places. Navarre's offers a broad menu of French dishes and fine steaks and chops. It has a capacity for 132 diners as well as a cocktail lounge. The motif is French provincial. The other restaurant, Helsing's, is located at the point of the intersection and features a short-order menu where a rapid turnover is the order of the day. This building was designed by Matthew E. Trudelle, Phoenix architect.

Other tenants in the shopping center include the W. T. Grant Co., a maternity shop, a jewelry store, a florist, a book and stationery shop, a men's haberdashery, a camera shop, a Gallenkamp shoe store, a blouse bar, a lamp shop and a record shop.

LIEFGREEN & McDONALD Flowers—The low bulkhead with the one course of stone under the metal furnishes a solid base for the glass and permits the use of wall decorations to be made clearly visible. The stone planting box to the right furnishes a versatile treatment of this portion of the entrance.

The location of the various units was carefully worked out so that all the soft lines are grouped together in a section, which is being referred to as "Petticoat Lane." Located among the soft lines are the jewelry store, book and stationery store and the florist, all of which are patronized primarily by women.

All of the buildings in the shopping center, with the exception of Helsing's restaurant, were designed by H. W. Green, veteran Phoenix architect. Before designing these buildings, Green traveled several thousand miles inspecting centers throughout the Southwest and West.

The design of the buildings is not only pleasing to the eye, but it is also very practical. Green designed the center so that a shopper can go from one end of the development to the other without ever being exposed to the sun's rays or to the elements. A 15-foot canopy has created very popular promenades in front of all the stores. The canopy is supported on the outer edge by pipe columns laced with ornamental iron work. Planters at the foot of most of the pipe columns contain vines, which are already climbing toward the canopy top.

Practically all of the customer parking is located in front of the stores in a manner which requires that no shopper walk over 250 feet to reach her destination. Service areas for all of the stores, with the exception of two or three, are provided in the rear area away from customer parking.

Every building has refrigerated air conditioning. The developers retained control of the use of signs, all of which are of white neon and are mounted on the

BOSTROM'S Housewore Store—The low bulkhead and clear vision, modern doors, give full view so that the store becomes a veritable show window.

facia of the building above the canopy. No flashing signs are permitted. The parking area is lighted and landscaped as are many of the other areas around the center.

The total land area is 10 acres, with the building covering 115,000 square feet. Parking is provided for 600 cars.

A quick economic analysis of the parking versus sales area reveals there is sufficient parking space to handle somewhere between $12 million and $15 million in annual gross sales, which is an average of $100 to $125 per square foot per year for the total building area. This is a high figure and the tenants agree with the developers that, if there is a shortage of parking, it will be only because these stores are doing a record breaking volume of sales.

The grand opening of the center was referred to as an "Opening Fiesta," and unlike most openings, included no personalities, no "gimmicks," or no carnival atmosphere. The merchants, together with the developers, spent approximately $10,000 for opening promotion. Most of this money was spent for newspaper space, radio and TV time. The results were exceptional. Most of the people who turned out were potential customers, instead of the crowd of gift seekers usually found at such affairs.

PETTY'S JEWELERS
To give variety Roman brick pilasters, bulkheads and walls were used together with hollow tubular entrance doors and a distinctive type of push and pull hardware. (Top.)

NIGHT VIEW (below) of one row of shops. All signs on top of marquee or superimposed on upper facade of building. Signs are under control of the shopping center management.

OFFICERS

Henry McLain, Vice-President (front center); Albert Barnes, Treasurer; Robert Harrington, Secretary; Vincent Raney, President; and Fred Ashley, Past President.

SAN FRANCISCO BAY AREA CHAPTER

Construction Specifications Institute

NATIONAL OFFICERS GRANT CHARTER TO NEW CONSTRUCTION INDUSTRY GROUP

By F. BOURNE HAYNE,
Associate Editor, "Specifications Digest"

The granting of a charter on September 10th by the National Directors of the Construction Specification Institute to the newly organized San Francisco Bay Area Chapter, and the first annual dinner of the local organization at El Jardin Restaurant on September 28th may mark the start of a greatly needed influence on the building industry in Northern California. The Bay Area Chapter is the fourth to be organized in the state, the others, which have been granted charters within the course of about the last two years, being located at Los Angeles, San Diego, and Sacramento. The parent chapter is located in Washington, D.C., while others exist at present in New York and Chicago. Interest in the Construction Specification Institute is growing rapidly and hopes loom large that its influence will greatly increase.

Apparently the ever growing complexities of the mighty building industry began to apall specification writers throughout the length and breadth of the nation following the Second World War. The building boom started shortly after V-J Day but building methods carried on in the traditional fashion. New methods, materials and equipment of every sort flooded the market and the specification writer found himself engulfed in an ever-increasing sea of building material literature as his head whirled with the endless sales chatter of the eager salesman. Cold facts about the quality, the advantages, and the disadvantages of building materials became more and more difficult to find. In an effort to start solving the complications and complexities a group of specification writers and others connected with building, met in Washington and on September 16th, 1948, adopted the by-laws of the newly founded Construction Specification Institute. Article No. 3 of these By-Laws states the "Objects" of the Institute which are as follows:

OBJECTS

3. The objects and purposes of the Institute and of its chapters are to foster and promote the interests of persons, firms, groups, associations, corporations and others engaged in any phase of the business of writing, preparing,

compiling, or in any way utilizing specifications in the construction and allied industries; to promote improved specification practices in the construction and allied industries; **to gather, compile and analyze statistics and information relating to or useful in the conduct of such activities; to engage in research and study of any and all problems and aspects of specification writing; to establish and maintain the Institute as a clearinghouse of unbiased technical information on specifications for the fabrication and installation of construction materials and equipment;** to promote closer relations and cooperation among its members and chapters; to further the common interests and opportunities of its members in any and every lawful manner and to do anything necessary and proper for the accomplishment of the objects and purposes herein set forth or which shall be recognized as proper and lawful objectives and purposes of a business league.

NEED FOR INSTITUTE

The need for an organization with such objects has been very great for a good number of years and it is hoped by many that this institute will grow in scope and influence so that exacting information concerning building methods, materials, and equipment may be quickly and readily obtained from a well organized central source of reliable information.

The parent organization in Washington publishes a quarterly entitled "The Construction Specifier" which has grown to a 78 page magazine containing no advertisements. The Southern California Chapter now publishes a quarterly known as "Specification Digest," the September issue of which contained 32 pages, and no advertising. Each of the other three chapters of the state make contributions to the Specification Digest and thus a vehicle for the distribution of news concerning specifications and materials is well started and established. The entire organization is still in the throes of embryonic development. The two magazines which it it publishes still contain many pages devoted to organizational development, chapter meetings, and lists of the names of new members, but most helpful articles on subjects concerning materials, methods, and equipment are taking up more and more space.

ORGANIZATION STARTED

San Francisco Bay Area chapter commenced its organization a year ago with the following as acting officers: G. F. (Fred) Ashley, A.I.A., as president; Henry McLain, specification writer of the Bechtel Corp., as vice-president; Robert W. Harrington, executive secretary of the Clay, Brick, and Tile Association, as secretary; and Albert E. Barnes of the Gladding, McBean Company as treasurer. This group set the wheels of organization into motion and dinners were held on April 20th and June 30th to which came men who had been notified of the forming chapter here. At the first annual dinner held on September 28 the local chapter started with 40 charter members and 26 associate members. At this dinner the news was announced that the San Francisco Area chapter had been granted its charter Formal elections were held and the following took their places as permanent officers; Vincent G. Raney, A.I.A., president; Henry McLain, vice-president; Robert Harrington, secretary; Al Barnes, treasurer. The Directors are: Henry C. Collins, Architect; Clement A. Mullins, Architect; Walter T. Steilberg, Architect; Leonard Tivol, Architect, and Robert Williams, Architect.

A program for procedure was presented by a committee composed of Architects Robert Williams and F. Bourn Hayne. Needs listed were a permanent office, filing cabinets with full equipment, other office furnishings, lists of a bibliographical nature of publications and articles by impartial authorities on materials, methods, etc., a custodian, and stenographic and secretarial services. Following the business of the evening Bourn Hayne gave a brief talk stressing the great importance of keeping the organization on a high, and unbiased level as well as the need for a system to keep track of information and for keeping all such information up-to-date. Vincent Raney, the newly elected president, then showed architectural slides in color which he had taken of Mexican architectrue as well as slides and movies of several of his lift-slab projects. Robert Miller of Contech Corporation showed a film on lift-slab construction techniques and the full program closed with Jay E. Jellick, manager of the Portland Cement Information Bureau, telling of recent findings in floor slab construction to avoid shrinkage cracks.

CONSTRUCTION MATERIALS CENTER NOW OFFERS VARIETY OF PRODUCT DISPLAYS

The first building materials reference library in the United States has just opened to the public in San Francisco at 330 Clay street.

The main display room contains an ingenious arrangement of sliding panels and drawers which will eventually contain the samples of some four hundred exhibitors. Each wall, floor and fixture in the display area represents a sample of one of the materials available. These are classified as in a catalogue so that all materials in any category are to be found together. Beginning with structural materials, such items as wood products, flooring, lighting, wall coverings and plastic laminates are segregated in sections. There is a section devoted to new products.

All of the manufacturers' literature is maintained at the reference desk, as is a list of distributors and

(See page 33)

Striking Effect of Porcelain Enamel and Fluted Aluminum

Pacific Gas and Electric Company New Morro Bay Steam Plant

WILLIAM
GLADSTONE
MERCHANT

ARCHITECT, A.I.A.
CONSULTING ARCHITECT

BECHTEL CORP.

GENERAL CONTRACTORS

MORRO BAY, CALIFORNIA

The striking effect of porcelain enamel and fluted aluminum on exterior surfaces of Pacific Gas and Electric Company's new Morro Bay Steam Plant was recently described by company officials as being one of the most architecturally attractive in the entire PG&E System. This, PG&E's sixth steam-electric station constructed since the end of World War II, will be the 13th steam plant in operation on the company's system. It is believed to be the first in American utility history to use salt water evaporators to provide the fresh water needed for steam generation.

The $44 million project, with its up-to-the-minute interior operational design, is outwardly up-to-date, as well. Its contemporary exterior appearance was accomplished by a series of horizontal planes, created by straight roof lines . . . perpendicular fluting of the aluminum, broken by horizontal panels . . . and, blending color contrast of dark and light gray "satin finish" porcelain enamel panels.

The porcelain enamel steel curtain wall construction was utilized in both flat and corrugated form for the central office building. These panels and those of the control building comprised approximately 11,000 square feet and were insulated with a fiber-glas core, having a "U" factor of .30. The balance of the 20,000 square foot porcelain enamel curtain wall project was installed on exterior surfaces of the machine shop and warehouse without insulation. Here, the interior face of each panel was treated with a bonding paint, so that the galvanized basic surface would accept decorative paint.

The large power building is approximately 148 feet, from ground to roof . . . while, the three smaller buildings have flat roofs of varying heights—28 feet, 6 inches, for machine shop—43 feet, 6 inches for office building—and, 18 feet, 9 inches for warehouse.

An Electronic and Tubular Extruding Company.

CLAUDE C. SLATE COMPANY

GLENDALE, CALIFORNIA

GEORGE NOVIKOFF

ENGINEERS & DESIGNERS

COORDINATED CONSTRUCTION CO.

GENERAL CONTRACTORS

JOHN B. KILROY

REALTOR & DEVELOPER

The 24,000 sq. ft. building and equipment involves an investment of $350,000 at the new, planned $55,000,000 industrial development at the Grand Central Industrial Centre in Glendale.

Situated on a 50,000 sq. ft. site on Flower street, the building is of pre-cast, reinforced concrete, tilt-up panel construction, with gypsum roof decking over steel framing. Air conditioned offices with modern glass treatment, are at the front of the building.

The Company's expanding business made the move to larger facilities from the concern's southside location necessary, declared Claude C. Slate, engineer, inventor, and company president.

The new plant is located near the San Fernando Road truck route, an off-ramp of the projected Golden State Freeway, and a 3,000 ft. Southern Pacific spur track. Wide access streets lead to the structure.

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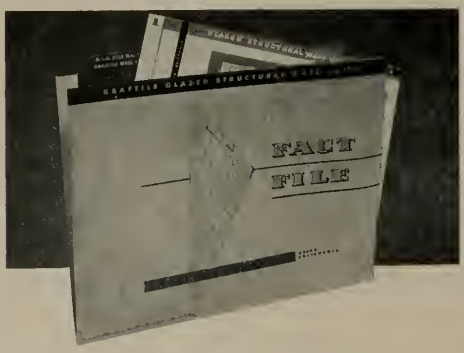

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Let us send you our new Fact Sheet answering that question. Dealing specifically with Commercial Kitchens and food handling areas, it compares 10-year costs of three commonly-used types of walls, shows the savings offered by Kraftile Glazed Structural Wall Units.

This Fact Sheet is one of a series in our Fact File Service. If you haven't our Fact File file folder and previously issued fact sheet on Washrooms, Toilets, etc., we'll gladly send it and put your name on our mailing list to receive future fact sheets as issued.

KRAFTILE COMPANY

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PASADENA CHAPTER

Colored film slides depicting modern architecture in Mexico City, including pictures taken at the University, and documentary shots of Chichen Itza on the Yucatan Peninsula, were shown by Architect Edward Davies at the October meeting. Davies has just returned from an extended stay in Mexico.

SOUTHWEST WASHINGTON CHAPTER

Hon. Horace Geer, President of the Tacoma Bar Association, was the principal speaker at a recent meeting, discussing many legal problems relative to the architectural profession and contracts. The meeting was held in the University Union Club, Tacoma.

"What's Wrong with Architects' Public Relations?" was the subject of a talk by Walter J. DeLong, Director of Information for Weyerhaeuser Timber Company, and a panel discussion which included representatives of television, newspapers, and industry at the October meeting held in Olympia.

NORTHERN CALIFORNIA CHAPTER

The Chapter has been invited to prepare an architectural exhibit and participate in the opening of the World Trade Center next Spring in San Francisco. As the opening of the World Trade Center will bring people from all over the world, it is an unusual opportunity to display work of Chapter members.

Recent new members include: Corporate, Douglas E. Harper, Luigi Dusmet de Smours, S. Clement Horsley, Donn Weaver, Thomas L. Sutton, Jr., Daniel G. Volkmann, Jr., and Douglas M. Merrill.

Northern California Chapter:
Wayne Hertzka, President; Wm. Stephen Allen, Vice-President; Rex Whitaker Allen, Secretary; C. Morrison Stephens, Treasurer; and Directors: Wm. Corlett, Robert Kitchen and Bernard Sabaroff. Executive Secy., May B. Hipshman. Chapter Offices, 26 O'Farrell St., San Francisco.

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Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tasker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment, Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council — Northern California Chapter (See Special Page)

OREGON CHAPTER

Modular coordination and new drafting room techniques was the subject of the October meeting in Portland, bringing to the attention of those present the latest trends in design practice.

Reports of Committee chairmen indicated the Fall season of activity was getting off to a good start.

CALIFORNIA COUNCIL OF ARCHITECTS

The 10th Annual Convention of the California Council of Architects, held in Santa Barbara, October 5-8, represented the largest gathering of architects in the history of the organization.

The four-day conference, presided over by Henry L. Wright, President, included a varied program of technical and educational meetings with many prominent architects from all parts of the nation taking part.

As in previous years the Convention was concluded with the annual Producers' Council Sportsmen's Dinner on Saturday night at which members of the Producers' Council of Southern and Northern California served as hosts.

WASHINGTON STATE CHAPTER

The Civic Arts Center question of allocating public funds for proper housing of Seattle's major cultural activities was discussed in considerable detail at the October meeting in the Sorrento Hotel, Seattle.

A proposal to raise funds for construction of a Civic Arts Center will be submitted to voters of the city early next year.

The Architect's Bowling League, in its ninth season, got underway again this Fall with 12 teams participating.

New members of the Chapter include: Dean Harris Sanders, Jesse T. Wilkins,Jr., C. Noel Wortman, Jack N. Bryant, James W. Ellison, Harold J. Nesland, A. V. Peterson, Richard H. Stradling, and Roland W. Ellison, Corporate Members.

SOUTHERN CALIFORNIA CHAPTER

"Activities of the California Council of Architects" was the theme of the October 11th meeting held in the Hollywood Athletic Club, with speakers including Donald Beach Kirby, Regional A.I.A. Director; Henry L. Wright, President, California Council of Architects; John Lyon Reid, Council Vice-President and staff members.

The meeting was an excellent opportunity for members to learn what the Council is doing and planning to do.

ARCHITECTURAL FIRM EXPANDS

Clarence Cullimore, Jr., A.I.A. Architect, has become associated as a partner in the firm of Kenney & Maag, Architects, Bakersfield.

The new firm to be known as Kenney, Maag & Cullimore, Architects, will specialize in the field of schools, hospitals, public buildings, and will maintain offices at 2 Niles Street, Bakersfield, and 1565 E. Tulare Street, Tulare.

Other members of the firm are E. J. Kenney and J. Henry Maag, Architect.

WITH THE ENGINEERS

Structural Engineers Association of California

G. A. Sedgwick, President (San Francisco); C. M. Herd, Vice-President (Sacramento); James L. Stratta, Secy.-Treas. Directors: Ben Benioff, Ernest D. Francis, C. M. Herd, Harold Omstead, Michael V. Pregnoff, G. A. Sedwick, Joseph Sheffet, James L. Stratta, J. G. Wright, William T. Wright. Office of Secy., 140 Geary St., San Francisco 8.

Structural Engineers Association of Northern California

Howard A. Schirmer, President; Walter L. Dickey, Vice-President; Harry B. Corlett, Secretary, Cecil H. Wells, Jr., Asst Secy.; William K. Cloud, Treasurer. Directors, William W. Brewer, Walter B. Dickey, Wesley T. Hayes, Jack Y. Long, Michael V. Pregnoff, Clarence E. Rinne, Howard A. Schirmer. Office of Secy., 411 Market St., San Francisco.

Structural Engineers Association of Central California

C. M Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

Louis J. Alexander, President; Nathan D. Whitman, Jr., Vice-President; David L. Narver, Jr., Vice-President; Jack E. McGee, Secretary; Gilbert W. Outland, Treasurer. Directors: Trent R. Dames and Sterling S. Green. Office of Secy., 1201 E. California St., Pasadena 6. Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

FEMINEERS

Jan Dykstra, representative of the Netherlands Consulate, San Francisco, was the principal speaker at the October meeting held in the San Francisco Elks Club.

Dykstra spoke on the subject "Holland" and pointed out many interesting things about the Dutch people and their country.

The Femineers' participation in the recent California State Convention of the Structural Engineers Association, Yosemite Park, including the Fashion Show Luncheon, Tea, Card Party and Croquet Games, were reported a success and much credit is due Mrs. Byron L. Nishkian, Mrs. Earl W. Paddack, Mrs. Fred Pavlow, Mrs. Michael V. Pregnoff, and Mrs. Charles G. Scurich.

SOCIETY OF MILITARY ENGINEERS CONVENTION

The 1956 Annual Technical Meeting of the Society of Military Engineers will be held in Chicago, February 9-10, 1956 in the Palmer House, with the Chicago Section serving as hosts.

Discussions will center around the subjects "The Role of Engineers in an Atomic Emergency," and "Technical Manpower and Production."

AMERICAN IRON AND STEEL INSTITUTE REGIONAL MEET

The Regional Technical Meeting of The American Iron and Steel Institute was held October 21 in the Mark Hopkins Hotel, San Francisco.

The morning sessions, presided over by H. H. Fuller, president, Bethlehem Pacific Coast Steel Corp., were devoted to a discussion of "The Research Approach to Western Development," by Dr. J. E. Hobson, Director of Stanford Research Institute, and "The Waiting Harvest," a 25-minute color sound film produced by the United States Steel Corp.

J. J. Martin, executive vice-president, the Colorado Fuel & Iron Corp., presided over the afternoon sessions, which considered the subjects of "Improved Productivity in a Wire Mill," by C. C. Tappero, superintendent of Wire Mills for the C.F.&I.; "Modern Rapid Methods of Chemical Analysis for Quality Control," by Hubert C. Sweet, Chief Metallurgical Engineer, Bethlehem Pacific Coast Steel Corp.; "Oxygen Converter Process," by George B. McMeans, vice president of operations for the Kaiser Steel Corp.; and the "New Approach to Open Hearth Maintenance," by Myron Strate, assistant works manager, Geneva Works, Columbia-Geneva Steel Division, United States Steel Corporation.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

The Annual Meeting of the California Council of Architects held in Yosemite Park, October 6-8, 1955, represented one of the most concentrated gatherings of engineers and allied interests ever held on the Pacific Coast.

With the three-day technical programs devoted to subjects of extreme interest and import under our present-day economic and scientific living, speakers of outstanding recognition in their respective fields discussed in great detail the tremendous progress being made to keep construction engineering ahead of actual requirements.

Social and entertainment interludes provided relaxation for a well rounded convention.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

Slum Clearance and Rehabilitation of Residential, Commercial and Industrial Buildings in the City of Los Angeles, was the subject of a program at the October meeting held in the Roger Young Auditorium and representing a joint meeting with the American Society of Civil Engineers.

Gilbert E. Morris, Superintendent of Building for the City of Los Angeles Department of Building and

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section
Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors: J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California
Henry M. Layne, President; William T. Wheeler, Vice-President; Donald F. Morgan, Secy.-Treas. Directors: Henry M. Layne, William T. Wheeler, William T. Wright, R. W. Binder, J. G. Middleton, Cydnor M. Biddison, Harold L. Manley. Office of Secy., 548 S. Spring St., Los Angeles.

Structural Engineers Association
of Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
CDR. Paul E. Seufer, President; J. G. Wright, 1st Vice-President; COL. Wm. F. Cassidy, 2nd Vice-President; H. T. Anderson, Secretary; Thomas Hurley, Treasurer. Directors: COL. L. R. Ingram, LTCOL. C. S. Lindsey, E. H. Thouren, CDR. W. J. Valentine, P. Wm. Kohlhaas, BGEN. D. F. Johns, RADM. C. A. Trexel, COL. Paul D. Berrigan, and Larry L. Wise.

Safety, and Harold L. Manley, Assistant Chief, Building Division of Conservation and Rehabilitation, Los Angeles Department of Building and Safety, were the principal speakers.

The program disclosed the fact that rehabilitation of slum buildings and clearance of slum areas is being successfully done in Los Angeles, and is being accomplished through joint efforts of local government and local business and industry, without Federal subsidy. It is estimated that the Los Angeles rehabilitation program has stimulated approximately $200,000,000 in business per year.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Rear Admiral Leslie A. Kniskern, USN, Inspector General, Bureau of Ships, was the main speaker at the October meeting held in the Presidio Officers Club, San Francisco.

Taking as his subject "The Navy's Off-Shore Shipbuilding Program, Europe," Admiral Kniskern discussed his recent three-year tour of duty abroad with headquarters in Paris, France. During this period he traveled more than 75,000 miles, principally in the coordination of shipbuilding programs for European countries.

The meeting was a joint meeting with members of the San Francisco Engineering Council.

AMERICAN SOCIETY FOR METALS PUGET SOUND CHAPTER

Reported by ED MURRAY,
Boeing Airplane Company

The use of nondestructive testing in industry was the subject of a talk by Richard Turner, Magnaflux Corporation, recently.

The speaker stressed the value of nondestructive testing, not for the techniques of the methods of testing, but for the value to industry in increasing profits, and pointed out that such testing "reveals the suitability of a part without destroying it."

Turner pointed out that in order to properly use nondestructive testing methods, consideration should be given to "why, when and where," and its value should be made known to and approved by "design, production and management groups."

"Why—should this inspection be made? To make a better product for lower cost.

"When—should this inspection be used? Whenever

(See page 33)

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PRODUCER'S COUNCIL PAGE

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President, John C. Cowley, **The Brookman Co., Inc.**, 2833 Third Street
Vice-President, Philip F. Brown, Jr., **Otis Elevator Company**, No. 1 Beach Street
Secretary, Stanley L. Basterash, **Western Asbestos Company**, 575 Townsend Street
Treasurer, John J. O'Connor, **H. H. Robertson Company**, 55 New Montgomery Street

Edited by Robert W. Harrington, **Clay Brick and Tile Association**, 55 New Montgomery Street

WILLIAM GILLETT, PRODUCERS' PRESIDENT, IN SAN FRANCISCO

William Gillett, president of Producers' Council, Inc., addressed a dinner meeting of officers and members, and architects, builders, contractors and dealers in San Francisco on October 17.

WILLIAM GILLETT
National President of Producers' Council

Drawing on his 27 years of widely varied experiences in the building industry, the speaker discussed "Industry Cooperation—Our Path For The Future," stressing the urgent need for greater cooperation among producers, specifiers, contractors, dealers, builders, financing institutions and other segments of the nation's construction industry.

Gillett has served as Chairman of the Metal Roof Deck Technical Institute, is a member of the Building Officials Conference of America, the U.S. Chamber of Commerce's Construction & Civic Development Committee, and is a member of the industry advisory committee to Federal Housing Commissioner Norman P. Mason.

"WHICH FLOOR GOES WHERE"

The September Information Meeting for Producers' Council held at the Sheraton-Palace Hotel was presented by Mr. William H. Rolfes, District Sales Manager, Congoleum-Nairn, Inc. The program, "Which Floor Goes Where," gave a very complete story of the different problems of what material is best suited for an individual floor use.

This program was illustrated by 35mm color slides. The information offered by Mr. Rolfes was directed to the architects and engineers in an effort to help them select the proper floor covering for their individual building problems. Following the program, there was a question and answer period where Mr. Rolfes answered several questions for the entire group and then offered to answer specific problems for any of the attendants of the meeting. There were approximately 68 architects, engineers, and members of the Producers' Council present at the meeting.

ILLUSTRATION AT LEFT: Architect Helen Douglas French draws U.S. Savings Bond number from basket held by John Cowley, while Phil Brown looks on.

AT RIGHT: John Cowley (left), Council president, and Wm. H. Rolfes discuss presentation of "Which Floor Goes Where."

USE QUALITY PRODUCTS — MANUFACTURERS OF QUALITY BUILDING PRODUCTS — THE PRODUCERS' COUNCIL — CONSULT AN ARCHITECT

ROOF PARKING FOR NEW BANK

Bank of America's new Sunset-Wetherly branch in Hollywood will have roof-top parking and is believed to be the first bank in Southern California with this modern feature.

Architect Raymond R. Shaw designed the building into the side of a hill so that its roof at the rear is at street level, allowing motorists to drive directly onto the building.

Other features include the newest system of teller service without windows or cash drawers.

W. H. CROWELL ELECTED POMONA TILE BOARD

Drew Schroeder, president of Pomona Tile Company, recently announced the election of Warren H. Crowell to the Board of the Pomona Tile Manufacturing Company.

Crowell is well known in California investment banking circles, and is a part chairman of the Board of Governors of the Los Angeles Stock Exchange.

CORROSION PROBLEMS FOR CONFERENCE

An intensive three day course of Corrosion Problems in the Process Industry will be given in San Francisco in November by the University of California in cooperation with the National Association of Corrosion Engineers, Western Regional Division.

Classes will be conducted daily from 8 to 5, November 14-15-16, at the University Extension Building, San Francisco.

The lecture roster is composed of twelve experts on Corrosion problems in the petroleum and chemical industries, and include such subjects as Equipment Inspection in Process Plants; Corrosion Testing in Process Plants; Handling Sulfuric Acid; Handling Caustic; and Cooling Water Problems.

AIRLINE TICKET OFFICE

Architect Hewett C. Wells of San Francisco is completing dawings for construction of an airline ticket office to be built in the St. Francis Hotel, San Francisco.

The work will comprise the remodeling, interior and exterior, of a portion of the ground floor level of the hotel building.

WAREHOUSE AND GARAGE

Architect John C. Lindsay of Los Angeles, and Harold Epstein, Engineer, of Beverly Hills, are preparing plans and specifications for construction of a brick and concrete panel office, warehouse and garage building to be built in the Venice district of Los Angeles for the Southern California Gas Company.

The building will cover an area of 189x60 ftfl; composition roof, asphalt tlie, ceramic tile and cement floors, plaster work, acoustic tile ceilings, forced air heating units, metal and glass partitions in office; underground gas storage waste oil tanks, grease pit and concrete paving.

Estimated cost of the work is $140,000.

MODEL HOME CONTEST FOR YOUNG STUDENTS

The Third Annual Model Home Contest for secondary school children, with a grand prize of a $1,000 scholarship, has been announced by Ernest B. Norman, Jr., chairman of the Educational Committee of the National Association of Home Builders, sponsors of the competition.

The contest is open to students of grades 7-12 in public or private schools in any part of the continental United States.

In addition to the scholarship, the grand prize includes a trip to Chicago for the winning student and his teacher-sponsor.

"There is a wealth of latent talent in architectural designing, landscaping, home building, home planning and decorating to be found in the industrial and vocational arts and home making classes in the schools of our nation," declared Norman.

NEW HIGH SCHOOL FOR NOVATO

Architect John Lyon Reid & Partners of San Francisco have completed drawings for construction of a new High School building for the Novato Unified School District of Novato, California.

Construction will be of frame and stucco.

ARCHITECT SELECTED

The architectural firm of Donald Powers Smith of San Francisco has been commissioned by the Sunnyvale Elementary School District, Santa Clara county, to design a new Elementary School building to be built in Sunnyvale.

The new plant will comprise 12-classrooms, 2-kindergartens, a library, multi-purpose room, kitchen, and toilet rooms. Construction will be of frame and stucco.

designed with

SCHOOL CLASSROOM IN MIND!

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PERSONALITIES

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Subdivider

Mountain View, California

A native Californian, Paul C. Petersen, president of Whitecliff Homes, was born in San Francisco on May 11, 1918, and now resides with his wife and two children in Los Altos, California.

PAUL C. PETERSEN
Subdivider

Petersen has been active in the construction business for 22 years, working as job superintendent for several Northern California firms since World War II, and prior to formation of his own company, Whitecliff Homes, incorporated in 1953.

Current projects of the firm include Fleming Towne (1200 homes) in Vallejo; Crestmoor Park in San Bruno; and Woodside Estates, which will provide sufficient acre-or-more sites for 1000 estate type homes of $25,000 and up.

Completed subdivisions include Fairfield Terrace, Fairfield; Hermosa Gardens, Santa Clara; Saratoga Gardens, Saratoga; and Christina Acres in Los Altos. In addition, the firm has built many individual homes to custom plans.

Petersen is a national director of the National Association of Home Builders; a director of the Home Builders Council of California; a director of the Santa Clara County Contractors Association, and an active member of the Santa Clara Home Builders Association.

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OPENS ARCHITECTURAL OFFICE

William E. Short, Architect, recently announced the opening of offices for the practice of Architecture at 3351 El Camino Real, Atherton, California.

Architect Short previously maintained offices in Palo Alto.

ART

(From page 6)

as Carr Howe, Jr., is currently showing the following special exhibitions:

Framing, Right and Wrong. An exhibition of twenty-two pairs of color reproductions in which the right and wrong selection of frames is demonstrated; Paintings by Marion Pike; Sculpture and Pottery by Miriam Hoffman; Paintings by Bella Gerstle Fleishhacker; Pastels and Watercolors by Nancy Galantiere; A Completely Integrated House, designed by Jack Hillmer; and American Paintings from the Museum Collections.

Educational activities include Saturday morning painting classes for children, ages 6-14; the organ program each Saturday and Sunday at 3:00 p.m.

The Achenbach Foundation for Graphic Arts is showing, at the museum, Surrealism and Its Forerunners, and A Historical Survey of the Graphic Arts, showing the development of various techniques in printmaking.

LOAN EXHIBITION AT PUBLIC LIBRARY:

The Loan Exhibition at the San Francisco Public Library is "The Shakespeare Galley," by John Boydell.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an Exhibition of Paintings by Karl Baumann, Amy Flemming, Jose Moya del Pino, and Sculptures by Angelo Caravaglia.

A special exhibition will be shown in the Little Gal-

PICTURE CREDITS—Haas & Associates, Cover, Pages 12, 13, 14; Crown Photo Service, Pages 9, 11 (right); Gabriel Moulin, Pages 10, 11 (bottom); Kawneer Company, Pages 15, 16, 17, 18, 19, 20, 21; Agricultural-Industrial Photo Service, Page 24 (top); Eddie Hoff, Page 5.

lery comprising a group of Sierra Scenes by Janet Doupnik.

ENGINEERS

(From page 29)

you can inspect for less than the cost of prevented waste.

"Where—should this inspection be used? As soon as possible in the manufacturing processes."

Turner showed the cost and pitfalls of inspection to tolerances set too tight. A profitable medium between the designer and production man must be reached before nondestructive inspection can pay its way.

One very interesting and practical example of nondestructive testing was in the use of a brittle lacquer-like coating, applied to a part which is then subjected to service loads. Highly stressed areas are revealed by crack frequency observed in local areas of stress concentrations. The slides showed different designs at the same part and their most highly stressed areas under static service loads. One type of stress coating is a ceramic-fired coat that is usable from —40°F to 700°F.

Another comparatively new inspection device is a sonic-type of depth indicator for wall thickness or flat discontinuities. Turner described how it was used as an automatic type of go- no go gage for the inspection of wall thickness in tubing. The instrument is similar to the Magnaflux Corporation's Sonizon.

Mr. Turner summed up his talk by saying that to properly evaluate a method of nondestructive testing, take a "good look" at production cost versus scrap.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

Attendance at the SEAC Annual Convention at Yosemite Park, was the largest in the history of the organization according to all reports.

Association members from San Francisco participated in many of the panel and technical discussions and also enjoyed the excellent entertainment provided.

Recent new memberships in the Association include: Samuel H. Clark, Bernard B. Gordon, Members; Henry L. McFalls and George F. Nelson, Affiliate Members.

CONSTRUCTION MATERIALS CENTER

(From page 23)

dealers so that the architect, contractor or member of the public can immediately secure all of the desired information on any product and such sources of supply as he might find convenient.

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signer, and Christine Sherman, decorator and designer, receiving the endorsement of the Northern California Chapter of the AIA for the stablishment of such a center began assembling the necessary exhibits and information.

Admission to the center and use of its information services is free. A signature in the register is all that is required. The center in San Francisco is now open between nine and five thirty on weekdays and between ten and two on Saturdays. Branches of the center will be opened in the following cities: Los Angeles, Seattle, Denver, San Antonio, St. Louis, Chicago, Miami, Philadelphia and New York.

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INSTITUTE OF ARCHITECTURAL DESIGNERS TO MEET

The Institute of Architectural Designers will hold a Board Meeting in the Miramar Hotel in Santa Barbara on Saturday, October 29th, according to a recent announcement.

Members of the Board expected to attend the Quarterly meeting include: William O. Brock of Sherman Oaks; Robert M. Sherman, San Mateo; LeVerne Hadley, Pasadena; Robert Severin, San Rafael; Edward Hageman, Jr., San Anselmo; Leslie Van Dorn, Sacramento; H. Buggenhagen, La Jolla; Edward Cronan, Santa Ana; Charles Taylor, Arcadia; Clair Erle, Glendale; Louis Mazzetti, Santa Barbara; and Oscar Werner, Altadena.

LEASING FIXED ASSETS

(From page 8)

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EDITOR'S NOTE: Ternan, Clauson & Co., Incorporated, inaugurated the ways and means for the establishment of the professional Leasing Broker and the use of The True Lease as applicable to many thousands of different kinds of fixed assets including equipment, machinery, fixtures, implements, vehicles, etc., and real estate more than three years ago. Trevor A. B. Ternan, president and founder of the firm, was in the banking business since a young man, starting in England. Mr. Ternan was oil loan correspondent for the Guardian Life Insurance Company for many years, traveling throughout the United States representing that concern. He is widely known in financial circles nationally. He is recognized and consulted as dean of the industrial leasing business. His authoritative writings on leasing are quoted by leading economists. Chairman of the board and treasurer of Ternan, Clauson & Co., Incorporated, is Ernest L. Clauson. Corporate headquarters are in Los Angeles and other offices are located in San Francisco, Chicago and Detroit.

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PAMPHLETS AND CATALOGUES

SYMPOSIUM ON METHODS OF TESTING BUILDING CONSTRUCTION—STP No. 166. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Price $2.75.

Seven excellent papers on testing, evaluating, and performance of building construction are presented in this symposium. Some of the conclusions are based on research results or factual evidence, whereas others are expressions of the author's opinion. In all instances, however, they indicate how building construction may be improved and the need for further research.

COMPILATION OF ASTM STANDARDS IN BUILDING CODES. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Price $6.00.

Represents in one compilation more than 250 ASTM specifications, methods of test, and definitions of materials included by reference in the major building codes of the United States and Canada. Due to the variety of materials covered and the many technical committees concerned, these standards previously have been scattered throughout the 10,000-page, seven-part Book of ASTM Standards. Although available as separates, the selection and accumulation of individual standards needed has been an uncertain means of securing the entire group. Realizing the need and utility of a special compilation of these ASTM Standards, this first edition has been prepared and is now available to architects, engineers, contractors and builders.

EVERYTHING AND THE KITCHEN SINK. By Farrar, Straus & Cudahy. The Philip Lesly Company, Chicago-New York. Price $4.00.

This book is a story of progress and the makers of progress, of the men who have made possible American civilization as it is today and who have built the basis of an even better future.

History affords ample recognition of the great statesmen, soldiers and inventors whose leadership and creativeness helped build America. But little acclaim has been given the dynamic men who have made things that benefit the people—who utilized the freedom of expression and opportunity molded by the statesmen . . . who built and strengthened the sinews of America defended by the soldiers . . . who turned the brilliant dreams of the inventors into practical, available realities for everyone. This is the story of the ingenuity, initiative and foresight of men such as Richard Teller Crane, who poured the first brass moulding in his new foundry in Chicago one hundred years ago . . . a story of men who get things done, who make progress, and who are producing and developing new wonders that promise even greater advances for the next hundred years.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Heat control in summer and winter. New 20-page booklet illustrates and describes home design principles for maximum heat control in summer and winter; contains many helpful suggestions relative to installation and proper orientation of the house location to reduce the amount of sun load on walls, roof and exposed windows; 23 illustrations, 16 sketches, 9 charts. Architects and engineers and builders may obtain a copy by writing DEPT-A&E, Owens-Corning Fiberglass Corpn., Toledo, Ohio.

Aluminum sliding doors and windows. A 16-page catalog (A.I.A. File No. 16E1) featuring the entire new line of Arislide aluminum sliding doors as well as Arislide aluminum sliding windows and steel sliding doors, has just been published; fully illustrated, the 2-color catalog gives detailed specifications on smooth operating aluminum and steel sliding doors for all types of residential and commercial construction; shipped knocked down for maximum freight saving; catalog contains illustrations of head, jamb and sill details for both types of doors and Arislide aluminum sliding windows, and

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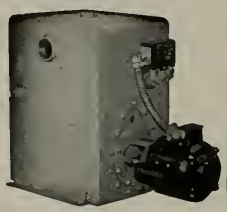

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complete installation details. For free copy write DEPT-A&E, N. K. Juvet, manager, Metal Windows & Doors Division, Michel & Pfeffer Iron Works, Inc., 212 Shaw Road, South San Francisco, California.

Asbestos-cement pipe for water systems. Illustrated, 8-page booklet shows manufacturing methods in producing asbestos-cement pipe for water systems and describes savings in installation time and outlines characteristic advantages once the pipe is in the ground; gives recommended procedures for installing; table of sizes and fittings included. "Transite Pressure Pipe and the Ring-Tite Coupling," copies available write DEPT-A&E, Johns-Manville, 22 E. 40th St., New York 16, N. Y.

Machine plastering. New 4-page, 2-color booklet (A.I.A. File 21A5), describes what machine plastering can do for the architect, designer, engineer, contractor, and owner of a building in breaking the bottleneck of applying vermiculite plaster and acoustical plastic in the building of homes, apartment buildings, schools, churches, and other industrial, commercial, and institutional buildings; Illustrated. Free copy write DEPT-A&E, Zonolite Company, 135 S. LaSalle Street, Chicago, 3, Ill.

Vibration mountings for medium and heavy machinery. Catalog describes a new line of vibration mountings for medium and heavy weight machinery; mountings offer a degree of vibration, shock and overload control previously unobtainable in a single mounting; detailed description of construction which consists of a pair of rubber-in-sheer isolators mounted at an angle between a semi-steel base and cover; describes load capacities and frequencies, illustrations of typical installations and Finn engineering services are described; rubber-bottomed baseplate eliminates "creeping" or "walking." Free copy of catalog for complete details, write DEPT-A&E, T. R. Finn Co., Inc., Industrial Division, 200 Central Ave., Hawthorne, New Jersey.

Some Hows and Whys of Modern Department Store Lighting. A new manual on store lighting represents a factual treatise covering the economics and mechanics of department store lighting; written in non-technical language covers subjects of "selling" goods with light; supplementary and service area lighting; maintenance; wall display and showcase lighting; accent lighting, and mass display lighting; the use of incandescent and fluorescent lamps is discussed as well as methods of mounting fixtures; suggestions on how to select proper equipment. Available write DEPT-A&E, Sylvania Electric Products Inc., 1740 Broadway, New York 19.

Fans for commercial and industrial ventilation. New 2-color, 4-page illustrated catalog, describes Ventura fans for commercial and industrial ventilation; Model B fans for commercial and light duty industrial exhaust installations; Model E fans for heavy duty industrial applications; catalog discusses features of V-belt drive; tables of performance; electrical power requirements; delivery ratings at different static pressures; fan speed; motor horsepower, nominal rotor diameter and net weight for each of the eight different sizes. Installation drawings. Write for copy DEPT-A&E, American Blower Corpn, Detroit 32, Mich.

Fire fighting equipment. New 16-page catalog on interior fire fighting equipment featuring a completely new line of extinguisher cabinets; fully illustrated and described; "two-piece" construction feature of cabinets, permits plumber or general contractor to assemble the angle valve, hose rack, fire hose and extinguisher inside cabinet box before door and trim are secured to box. Copy available, write DEPT-A&E, Fyr-Fyter Co, 221 Crane St., Dayton, Ohio.

Allowable load values. New brochure (A.I.A. FILE No. 14-J) describes in detail the Artcor building specialties including allowable load values for structural building specialties being required by many designers and building officials. Sizes, weights, and allowable loads for joist hangers, joist anchors, tie straps, framing anchors, clevises, split rings, and similar items are shown. Several new items are included in the catalog. Free copy available, write DEPT-A&E, Arch Rib Truss Corpn, P.O. Box 6742, Los Angeles 22.

Oxychloride flooring. New brochure (A.I.A. File No. 23-D) describes oxychloride, what is is, where it is used and why it is used; illustrates a number of installations; gives details of installation in charts and graphs. Copy free write DEPT-A&E, Oxychloride Cement Ass'n, 1832 M St., N.W., Washington, 6, D.C.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... .35 per 100 ft.
Sash weights, cast iron, $100.00 to..
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
9-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull brass plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.62

Aggregates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. ..... $..75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	¾x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	290
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390.00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass ..... $ .30 per □ ft.
Double Strength Window Glass ..... .45 per □ ft.
Plate Glass, ¼ polished to 75 ..... 1.60 per □ ft.
75 to 100 ..... 1.74 per □ ft.
¼ in. Polished Wire Plate Glass ..... 2.50 per □ ft.
¼ in. Rgh. Wire Glass ..... .80 per □ ft.
⅛ in. Obscure Glass ..... .44 per □ ft.
3/16 in. Obscure Glass ..... .63 per □ ft.
⅛ in. Heat Absorbing Obscure ..... .54 per □ ft.
3/16 in. Heat Aborbing Wire ..... .72 per □ ft.
⅛ in. Ribbed ..... .44 per □ ft.
3/16 in. Ribbed ..... .63 per □ ft.
⅛ in. Rough ..... .44 per □ ft.
3/16 in. Rough ..... .63 per □ ft.
Glazing of above additional $.15 to .30 per □ ft.
Glass Blocks, set in place ..... 3.50 per □ ft.

HEATING—

Furnaces—Gas Fired
Floor Furnace, 25,000 BTU ..... $ 70.50
35,000 BTU 77.00
45,000 BTU 90.50
Automatic Control, Add 39.00
Dual Wall Furnaces, 25,000 BTU 91.50
35,000 BTU 99.00
45,000 BTU 117.00
With Automatic Control, Add 39.00
Unit Heaters, 50,000 BTU 202.00
Gravity Furnace, 65,000 BTU 198.00
Forced Air Furnace, 75,000 BTU 313.50
Water Heaters—5-year guarantee
With Thermostat Control,
20 gal. capacity 87.50
30 gal. capacity 103.95
40 gal. capacity 120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3¾") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—

Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—

(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pentries seven ft. high, per lineal ft., upper $9.00 to $11.00: lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpantry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $..5.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1 gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (8asis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1 65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½ pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$...	$... ....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Gient Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12', $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10
1 ton to 5 tons, deduct 25c.	

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼". @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	$ .17
12 x 12, each	

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .25
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete date on the dealer, or representative, may be found.

ADHESIVES (1)
Wood and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 0126B
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE B494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2B93
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.

PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3D66
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-41DD
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: B20 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR B393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR B282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-D188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EY 2 7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.

SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.

UTILITY APPLIANCE CORP. *(21

Electric Heaters

WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating

THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760

PACIFIC COAST AGGREGATES, INC. *(11)

SISALKRAFT COMPANY *(9)

WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors

HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles

LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnerd St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO. *(9b)

LUMBER MANUFACTURING COMPANY *(18)

MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815

PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint

W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim

PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors

PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio

THE SCOTT COMPANY *(17)

HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341

CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations

GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows

DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890

MICHEL & PFEFFER IRON WORKS, INC. *(13)

PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors

DETROIT STEEL PRODUCTS COMPANY

Skylights

DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733

HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767

JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717

REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building

SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)

HERRICK IRON WORKS *(33)

SAN JOSE STEEL CO. *(33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800

GLADDING, McMEAN & CO. *(3)

KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses

Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber

J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)

GLADDING, McBEAN & CO. *(3)

KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)

MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983

PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161

J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525

DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718

CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440

MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516

E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579

PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697

ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh

PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the Stote of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%Prom	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB 12½cv; 10cp	10cw	10cw	10cw	10cw	10cw	10cw	10cw IcA			10cw	10cw	10cw
ROOFER	7½cw 7½cv	12½cv	11½cA	10cp; IcA	12½cv	10cp; IcA							
SHEET METAL WORKER	7½cw 7½cv 3¼cv	7½cw 5cv 3¼cv	7½cw 5cv 2%v	7½cw	7½cw	7½cw	7½cw 5cv 7½cv	7½cw 4%v 7½cw	8½cw 6½cv 7½cw	8½cw 6½cv	8½cw	8½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cp 12½cv; 2½cJIB	10cw IcA	10cw IcA	10cw 10cp; IcA	10cw 12½cv	10cw 10cp; IcA	10cw	10cw IcA			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%Prom				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

BANK, Albuquerque, New Mexico. Albuquerque National Bank, Albuquerque, owner. 3-Story brick, granite, aluminum anl marble construction; 64,000 sq. ft. floor area—$1,069,300. ARCHITECTS: Ferguson, Stevens & Associates, Albuquerque. GENERAL CONTRACTOR: Robert E. McKee, Santa Fe, New Mexico.

BRANCH LIBRARY, Sunset, San Francisco. City & County of San Francisco, owner. 1-Story concrete block and frame with some structural steel, cork and vinyl tile and terrazzo floors, aluminum sash, acoustical ceilings — $148,200. ARCHITECT: Appleton & Wolford and Chas. W. Griffiths, San Francisco City Architect, San Francisco. GENERAL CONTRACTOR: Robert L. Wilson, San Francisco.

RADAR AIR TRAFFIC CONTROL CENTER, Moffett Field, Santa Clara county. U. S. Navy District Public Works, owner. Work comprises 3 buildings, all utilities, earthwork, paving, concrete and steel work, plumbing diesel engine generator, air conditioning, fuel storage tanks, electrical work, and field painting—$184,375. GENERAL CONTRACTOR: Harrod & Williams, Sunnyvale.

SCHOOL ADDN., Elementary, Rohnerville, Humboldt county. Rohnerville Elementary School District, Rohnerville, owner. Frame and stucco construction; 5 classrooms, platform, toilet rooms—$139,656. ARCHITECT: Ernest F. Winkler, San Francisco. GENERAL CONTRACTOR: Walter L. Olsen, Santa Rosa.

SUNDAY SCHOOL BLDG., Menlo Park, San Mateo county. Menlo Presbyterian Church, Menlo Park, owner. 2-Story frame and stucco construction—$156,565. ARCHITECT: Leslie I. Nichols, Palo Alto. GENERAL CONTRACTOR: Harrod & Williams, Sunnyvale.

OFFICE BLDG., Palo Alto, Santa Clara county. Crist, Peters & Donnegan, Palo Alto, owners. 1-Story reinforced concrete tilt-up construction, wood roof, 6700 sq. ft. floor area—$75,564. ARCHITECT: Leslie I. Nichols, Palo Alto. GENERAL CONTRACTOR: Conrad Gresham, Saratoga.

TULELAKE HIGH SCHOOL, Siskiyou county, Siskiyou Joint Union High School, Yreka, owner. Frame and brick veneer, concrete floor, wood roof; 13,753 sq. ft. floor area: administration, 9 classrooms, library, boiler rooms, toilet rooms—$188,000. ARCHITECT: Howard R. Perrin, Klamath Falls, Oregon. GENERAL CONTRACTOR: Louis Kowolowski, Madras, Oregon.

PRIMARY SCHOOL, Walnut Creek, Contra Costa county. Walnut Creek Elementary School District, Walnut Creek, owner. Wood frame and structural steel and frame and stucco, building; 12 classrooms, administration office, multi-purpose, 2 kindergartens, kitchen, teachers room, toilet rooms and site work—$422,268. ARCHITECT: Schmidts & Hardman, Berkeley. GENERAL CONTRACTOR: B. & R. Constn. Co., San Francisco.

ELECTRONICS RESEARCH LABORATORY addn., Stanford University Campus, Palo Alto, Santa Clara county. Stanford University, Board of Trustees, Palo Alto, owner. 1-Story concrete block and frame construction, concrete floors, radiant heating; 7,500 sq. ft. floor area—$73,714. ARCHITECT: Ambrose & Spencer, San Francisco. GENERAL CONTRACTOR: Wells P. Goodenough, Palo Alto.

SHERIFF'S STATION, West Hollywood, Los Angeles county. County Board of Supervisors, Los Angeles, owner. Contractor given 300 days to complete work—$261,563. GENERAL CONTRACTOR: R. C. Gallyon Constn. Co., Burbank.

CHURCH, San Mateo. Hillsdale Methodist Church, San Mateo, owner. Frame and stucco church building—$162,510. ARCHITECT: Alfred Johnson, San Francisco. GENERAL CONTRACTOR: Pacilc Coast Builders, San Francisco.

ELEMENTARY SCHOOL, Castro Valley, Alameda county. Castro Valley Elementary School District, Castro Valley, owner. Frame and stucco; administration facilities, 7 classrooms, multi-purpose room, kindergarten, kitchen, toilet rooms—$233,650. ARCHITECT: Dean Lilles, Vallejo. GENERAL CONTRACTOR: Pacific Coast Builders. San Francisco.

MEDICAL BLDG., Hillsdale, San Mateo county. Peninsula Medical Association, Burlingame, owner. 2-Story frame and stucco construction; 14 office suites, total 16,000 sq. ft. floor area—$277,600. ARCHITECT: Stone & Mulloy & Marraccini, San Francisco. GENERAL CONTRACTOR: Williams & Burrows, Belmont.

PLUMBING SHOP, Los Angeles. Harry Friedman, Los Angeles, owner. Frame and stucco building, composition roof, concrete and asphalt tile floors, interior plaster, office space, toilets, pipe columns, skylights, brick veneer, plate glass front, asphaltic concrete paving; 50x60 ft.—$18,000. ENGINEER: David Witherly,

ARCHITECT and ENGINEER

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Los Angeles. GENERAL CONTRACTOR: Contracting Engineering Company, Los Angeles.

OFFICE BLDG., Oakland, Alameda county. Associated Investment Co., c/o Gen. Contractor, owner. 3-Story addition to present 4-story building, tructural steel frame and reinforced concrete construction—$425,000. ENGINEER: L. F. Robinson, Berkeley. GENERAL CONTRACTOR: Bayshore Construction Co., Berkeley.

SAVINGS & LOAN OFFICE, Alhambra, Los Angeles county. 2-Story frame and stucco office building for Wilshire Federal Savings & Loan Association, Los Angeles. ENGINEER: Leslie A. Rivin, Cunneen Co., Los Angeles. GENERAL CONTRACTOR: J. A. McNeil Co., Inc., Alhambra.

ARCADE SHOPPING CENTER, Sacramento. J. M. Walker & Lloyd Donant, Sacramento, owner. 1-Story concrete block, structural steel frame, concrete floors, plate glass front; 36,000 sq. ft. floor area, supermarket and stores—$300,000. ARCHITECT: Paul Hammarberg, Berkeley. GENERAL CONTRACTOR: Walker & Donant, Sacramento.

CHURCH SCHOOL ADDN., San Mateo. Grace Lutheran Church, San Mateo, owner. Frame and stucco, composition roofing—$66,450. ARCHITECT: Vinvent G. Raney, San Francisco. GENERAL CONTRACTOR: Charles Pedersen, San Mateo.

HIGH SCHOOL, Downey, Los Angeles county. Downey Union High School District, Downey, owner. Earl Warren High Scrool consisting of administration building, library, home economics, music and drama, multi-purpose, boiler room, science building, physics building, shop building, and three classroom buildings with a total floor area of 89,955 sq. ft.—$1,291,575. ARCHITECTS: Clifford K. Denman and Harry T. MacDonald, Los Angeles. STRUCTURAL ENGINEER: S. B. Barnes. CIVIL ENGINEER: John S. Gregory. MECHANICAL ENGINEERS: Storms & Lowe. GENERAL CONTRACTOR: Crown Constrn. Co., Los Angeles.

GROCERY STORE, Fairfield, Solano county. Lucky Stores, San Leandro, owner. Frame and stucco grocery store building, 165,000 sq. ft. floor area — $178,027. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Jos. Bettancourt, South San Francisco.

DORMITORY & CLASSROOMS, Camarillo, Ventura county. Roman Catholic Archbishop of Los Angeles, Los Angeles, owner. 2-Story, reinforced brick domitory and 1-story, reinforced brick classroom and recreation building; 27,200 sq. ft. floor area, tile and composition shingle roofs, concrete, ceramic tile, asphalt tile and plywood floors, metal sash, laminated wood trusses, plaster and acoustical tile, hot water heating system, steel joists, concrete walks, plumbing and electrical. ARCHITECT: Montgomery & Mullay, Los Angeles. GENERAL CONTRACTOR: Escherich Bros., Los Angeles.

ELEMENTARY SCHOOL, Fairmont Terrace, San Lorenzo, Alameda county. San Lorenzo Elementary School District, San Lorenzo, owner. Frame and stucco, addition comprising administration facilities, 3-classrooms, multi-purpose, addition to toilet rooms, and rehabilitate present administration and storage rooms—$93,492. ARCHITECT: Schmidts & Hardman, Berkeley. GENERAL CONTRACTOR: D. Ross McClellan, Hayward.

MEDICAL BLDG., Reno, Nevada, Pincolini, % Architect, owner. 2-Story and basement, structural steel frame, brick veneer, aluminum sash, vinyl tile floors, elevators; facilities for 12-suites of offces—$227,946. ARCHITECT: Russell Mills, Reno. GENERAL CONTRACTOR: J. C. Dillard, Reno.

ANIMAL HOSPITAL, Chino, San Bernardino county. Drs. Brennan & Laske, Chino, owners. Concrete block construction, composition roofing, air conditioning, interior plaster, fixed plate glass, slab doors, black top yard paving, block planters, toilet facilities, chain link fencing, animal runs, electrical, plumbing, concrete work; 1700 sq. ft. floor area. ARCHITECT: Pierre Woodman, Ontario. GENERAL CONTRACTOR: Louis E. Soupene, Chino.

LIBRARY & CLASSROOMS, East Campus, Concord, Contra Costa county. Contra Costa Junior College, Concord, owner. Completion of ground floor library and classroom facilities, steel sash, reinforced concrete and brick veneer; 14,000 sq. ft. floor area — $102,193. ARCHITECT: Harry Nakahara, Martinez. GENERAL CONTRACTOR: F. P. Lathrop, Berkeley.

SERVICE STATION, San Marino, Los Angeles county. Union Oil Company, Los Angelcs, owner. Steel canopy, composition roofing over plywood sheathing, wood overhead door, folding steel gates, concrete slab floor, fixed windows, toilet rooms; 1040 sq. ft. floor area — $30,000. GENERAL CONTRACTOR: Myers Bros., Los Angeles.

HIGH SCHOOL, E. M. Downer, Jr., San Pablo, Contra Costa county. Richmond Union High School District, Richmond, owner. 2-Story type I, reinforced concrete building; comprising administration facilities, 30-classrooms, science, home making, cafeteria, library, shops, gymnasium, and toilet and locker rooms; 123,000 sq. ft. floor area — $1,918,730. ARCHITECT: Donald L. Hardison, Richmond. GENERAL CONTRACTOR: Stotle, Inc., San Leandro.

SHOPPING CENTER, Garden Grove, Los Angeles county. Tietz Construction Co., Garden Grove, owner. Precast concrete construction, tapered steel girders, steel roof decking, composition roofing, concrete slab and asphalt tile floors, plumbing, electrical, forced air heating, aluminum store front, brick and veneer, asphalt paving; 28,000 sq. ft. floor area. ARCHITECT: Roy Donley, Los Angeles. GENERAL CONTRACTOR: Millie & Severs en, Inc., Long Beach.

GIRLS GYMNASIUM, High School, Madera, Madera county. Madera Union High School District, Madera, owner. Frame and stucco construction new girls gymnasium at high school — $204,377. ARCHITECT: Chas. D. James, Madera; GENERAL CONTRACTOR: Larsen-Ratto Constn Co., Fresno.

STORE BLDG., Burbank, Los Angeles county. Ray Sence, Burbank, owner. Masonry, frame and stucco building, composition roofing, concrete slab, plastering, toilets, plate glass, security sash, electrical, plumbing. GENERAL CONTRACTOR: Stuart J. Stallard.

MEDICAL BLDG., San Francisco. Fred Zelinsky, San Francisco, owner. 3-Story apartment building to be remodeled into 20-medical suites, offices and laboratory; interior and exterior remodel—$175,000. PLANS: Wm. B. Davis & Associates, San Francisco. GENERAL CONTRACTOR, Jacks & Irvine, San Francisco.

BAKERY WAREHOUSE, Fullerton, Los Angeles county. Helms Bakery Co., Fullerton, owner. Tilt-up concrete wall construction, steel beams, composition roofing, slab floor, overhead doors, plumbing, electrical. ARCHITECT: Van Dyke & Barnes, Architects & Engineers, Los Angeles. GENERAL CONTRACTOR: C. L. Peck, Los Angeles.

AUTOMOBILE AGENCY, Reseda, Los Angeles county. Tom Ballard Oldsmobile, Reseda, owner. 1 and 2-story concrete block automobile agency; composition roofing, concrete slab floor, steel roof decking, heating and ventilating, plate glass, metal sash, terrazzo, aluminum and glass entrance doors, interior plaster, acoustic tile, pipe columns, toilet rooms, ceramic tile, asphaltic paving; 40x192 ft. ARCHITECT: Benedict & Johnson, Sherman Oaks. GENERAL CONTRACTOR: Encino Constn Co, Encino.

BANK, Redding, Shasta county. First Western Bank & Trust Co., San Francisco, owner. Remodel existing building, exterior and interior—$60,000. ARCHITECT: Clayton Kantz, Redding. GENERAL CONTRACTOR: Robert S. Bryant, Redding.

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IN THE NEWS

DORMITORY FOR U OF REDLANDS

Architects Smith, Powell & Morgridge of Los Angeles have been commissioned to prepare plans and specifications for construction of a reinforced concrete dormitory building at the University of Redlands in Redlands.

The dormitory will contain 21,000 sq. ft. of floor area; red tile roofing, concrete floors, asphalt tile floor coverings, and will cost an estimated $350,000.

ARCHITECT SELECTED

The City of Modesto has commissioned architect John W. Bomberger of Modesto to draft plans and specifications for construction of a new modern City Hall to be built in the city of Modesto.

NEW LAMP FOR DRAFTING BOARDS

A new lamp has been perfected for lighting drafting and drawing boards of architects, engineers, and draftsmen which illuminates the entire working area with 100 foot candles.

It provides perfect, shadowless light even on corners of drafting board. Four feet long, uses two 40-watt fluorescent lamps. Passes rigid specifications of illuminating engineers; adjustable for height; absence of heat radiation makes for comfortable working conditions; no moving parts to wear out. Once installed, the lamp provides ideal lighting for many years.

This new lamp can be installed in a few minutes; complete with extension cord. Manufactured by The Midwest Lighting Products Co., P.O. Box 536, Cleveland 7, Ohio.

SHOPPING CENTER

Architect Peter Kump of Menlo Park is working on drawings for construction of a new Shopping Center to be built on the Alameda de las Pulgas in San Mateo at an estimated cost of $1,000,000.

Architectural plans will be developed along the Ranch type of construction.

STUDENT UNION AND DORMITORY AT UC

San Francisco Bay Area contractors are formulating bids for construction of a Student Union and Dormitory buildng to be built at the University of California Medical Center in San Francisco.

The new building will provide quarters for 148 nursing students and quarters for 45 interns and house staff. The Student Union portion will include lounges, meeting rooms, barber and beauty shops, eating facilites, book store and music room, with an athletic wing containing an indoor swimming pool, gymnasium, combination handball and squash courts. Off street parking will provide for 125 automobiles and will be provided with a double-deck section.

Estimated cost of the project is $2,800,000.

FURNITURE WAREHOUSE

Architect J. Francis Ward, San Francisco, is completing drawings for construction of a 1-story, 200,000 sq. ft. floor area, reinforced concrete warehouse building to be built in San Francisco for the Sterling Furniture Company.

The building will be tilt-up type, with wood roof trusses and wood roof. Estimated cost is $1,000,000.

MULTI-DECK PARKING

The consulting engineering firm of Bowen, Rule & Bowen of Los Angeles is preparing plans and specifications for construction of a 3-story parking facility in Glendale for the city.

The structure will be of structural steel and reinforced concrete and in addition to providing space for 249 automobiles, will be equipped with a heliport on the roof.

ELM WEINGARDEN NAMED NATIONAL SALES MANAGER

Elm Weingarden, west coast regional sales manager for the Given Manufacturing Company, Los Angeles, has been appointed assistant national sales manager of the firm, according to an announcement by Bertram Given, executive vice president.

Weingarden started work for the company in 1948 as sales coordinator of direct dealer sales in the Los Angeles area.

MEDICAL BUILDING

Architect Donald L. Hardison of Richmond, is completing drawings for construction of a 2-story, part basement, frame and stucco, medical building to be built in Oakland.

The new building will contain facilities for 5-suites of offices, and will comprise 8,000 sq. ft. of floor area.

NEW FORD-MERCURY PLANT STARTED

The architectural firm of Smith, Hinchman & Grylis of Detroit, Michigan, has started plans for construction of a new Mercury automobile plant on a 200-acre site in the Rivera industrial section of Los Angeles, for the Ford Motor Company.

The new plant will contain 1,300,000 sq. ft. of floor space and will be completed in about two years.

GEORGE C. KOSS ELECTED PRESIDENT OF AGC

George C. Koss of Des Moines, Iowa, highway and paving contractor, was installed as 1955 president of the Associated General Contractors of America recently.

Also named to important association posts were Edward O. Earl of the San Xavier Rock & Sand Company, Tucson, Arizona, vice chairman of the Highway Contractors Committee; James W. Cawdrey of Cawdry & Vemo, Seattle, Washington, chairman of the Building Contractor's Division; and George C. Loorz of Stolte, Inc., Oakland, vice chairman of the Heavy Construction and Railroad Contractor's Division.

Named to serve as Directors were: W. C. Foss of J. A. Terteling & Sons, Boise, Idaho; Charles L. Harney of Charles L. Harney, Inc., San Francisco; C. L. Hubner of C. L. Hubner, Denver; and J. P. Gibbons of Gibbons & Reed Company, Salt Lake City, Utah.

AUDITORIUM BUILDING

The American Legion Post No. 436 of Los Angeles is constructing a frame and stucco auditorium building at 5427 Huntington Drive North, covering an area of 70x67 ft.

The building will have a composition roof, interior plaster, gas wall heaters, cooler system, kitchen facilities, toilets, steel sash, brick veneer, and asphalt paving for parking.

DORMITORY BUILDING

Architects Binder & Curtis of San Jose have completed drawings for construction of a new Dormitory building on the campus of Santa Clara University.

The new building will provide facilities for 150 students and will comprise a 3-story, with basement, reinforced concrete construction, tile roof, steel sash, and asphalt tile floors.

Estimated cost of the work is $400,000.

SWIMMING POOL TO BE COVERED

Architect Jack Buchter & Associates of Orinda is completing plans for construction of a reinforced concrete bent covering for the swimming pool at the Vallejo Unified School in Vallejo.

Estimated cost is $50,000.

NEW SELF FILLING RULING PEN

To insure precision performance and longer life, this new ruling pen is equipped with hard-chromium plated pen nibs; lasts eight to ten times longer than similar parts not so treated.

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NEW HIGH SCHOOL BUILDINGS

The architectural firm of Kress, Goudie & Kress of San Jose is preparing drawings for construction of a new High School building to be built in the Alum Rock district, near San Jose, for the East Side Union High School District.

The first unit will provide facilities for

administration, classrooms, locker rooms and showers, toilet rooms, science, and home making.

OFFICE BUILDING

Architect Herman C. Light of Los Angeles is completing drawings for construction of a 2-story frame, stucco and stone veneer office building on Beverly Blvd., Los Angeles, for Max Weiss.

The new building will contain 16,000 sq. ft. of floor area, composition roofing, concrete slab, asphalt tile and wood floors. Complete air conditioning.

ARCHITECT SELECTED

The architectural firm of Confer & Willis of Oakland has been commissioned by the City of Pittsburg to draft plans and specifications for construction of a new City Hall and Jail building to be built in the city of Pittsburg.

HENRY E. NORTH ELECTED PRODUCERS COUNCIL BOARD

Henry E. North, Jr., president of Arcadia Metal Products, Arcadia, has been elected to the national Board of Directors of the Producers' Council, an organization comprised of leading manufacturers in the building products field.

North is active in construction materials industry in Southern California and the west coast.

LARGE MOTEL

Plans are underway for construction of a 280 unit motel in the city of Delano, San Joaquin valley, by Mikles and Power, engineer and architects of Bakersfield.

Each unit will be 25x50 ft., and living quarters for the owner will contain 2000 sq. ft. Included in the plans is a swimming pool, children's playground and a service station.

UHLER ELECTED PRESIDENT ARCHITECTURAL HARDWARE

Arthur H. Uhler of San Gabriel, California, was elected president of the American Society of Architectural Hardware Consultants at the Society's recent annual meeting held in St. Louis, Missouri.

Uhler, regional manager of the eleven western states for The Stanley Works, is a past president of the Southwest Chapter of the American Society of Architectural Hardware Consultants, member of the Builder's Hardware Club of Southern California, and past president of the Tenemar Boosters Club.

COMMUNITY APARTMENT

Architects Confer & Willis of Oakland are preparing plans and specifications for construction of a 14-story Community Apartment building to be built on Lakeshore Drive in Oakland.

The building will contain some 60-apartments; two floors of garage space, and will be of structural steel frame reinforced concrete construction.

Estimated cost is $2,500,000.

CHURCH AND PARISH HALL

Architects Ryan & Lee of San Francisco are working on drawings for construction of a new Parish Hall and Church for the Roman Catholic Archbishop of San Francisco, to be built in Greenbrae, Marin county.

The building of 2-story design, will be of frame and stucco construction and will have a tile roof.

Estimated cost is $160,000.

ARCHITECT SELECTED

Architect Alastair Simpson of Fresno has been commissioned by the Fresno Community Hospital to design an addition to the Fresno Community Hospital.

Estimated cost of the addition is $3,000,000.

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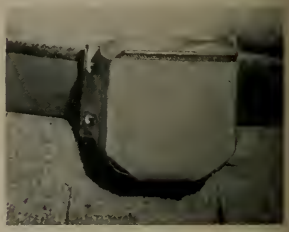

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CHURCH BUILDING FOR SAN MATEO

Architect Donald Powers Smith of San Francisco is completing drawings for construction of a new Church Building in San Mateo for the First Presbyterian Church.

The new building will be of reinforced concrete and frame construction and will cost an estimated $235,000.

AIRLINES BUILD TICKET OFFICE

Burke, Kober & Nicolais, Designers, of Los Angeles, are completing plans for

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construction of a Airlines Ticket Office in the Market-New Montgomery street corner of the Sheraton-Palace Hotel in San Francisco.

The project will comprise the remodel of interior and a new front.

CHURCH READIED

Architect George J. Steuer of San Leandro is completing drawings for construction of a new Church to be built in Oakland for the Roman Archbishop of San Francisco.

The new building will be of reinforced concrete and frame construction, with tile roof and have a seating capacity of 1,000 persons.

Estimated cost is $300,000.

MASTER MOTEL FOR DELANO

A 150-unit motel will be built in Delano, California, at a cost of $200,000, according to Douglas McFarlane, the owner.

The unit will be the first stage of construction and will include motel units, owners quarters, offices, parking facilities, kitchen and dining room and cocktail lounge. Mikles & Power of Bakersfield are the architects.

STORE BUILDING WEST LOS ANGELES

Architect R. Leon Edgar of North Hollywood has completed plans for construction of a 170x120 ft. Marker Building to be built in the West Los Angeles district for Leland M. Ford of Pacific Palisades.

The building will have a composition and gravel roof, concrete, asphalt tile and ceramic tile floors, central heating and ventilating plant; freezer rooms, and rolling steel doors.

Estimated cost is $190,000.

MUSHROOM GROWING PROCESSING PLANT

Architect John S. Bolles of San Francisco is working on plans and specifications for construction of a 1-story, reinforced concrete mushroom growing and processing plant for the Campbell Soup Company.

The new plant is to be built in San Mateo county near Pescadero.

NEW GUN-TYPE OIL BURNER

This efficient new unit, which utilizes the No. 5 Heavy Oil, saves 30% to 40% on fuel and produces 8% to 10% more heat units per gallon. A dual piston, self-lubricating air compressor maintains high pressure for burning the heavy oil.

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MEDICAL BUILDING

The architectural firm of Hertzka & Knowles of San Francisco are completing plans for construction of a new Medical Building to be built in San Francisco.

The building will be of 1-story, frame and stucco construction, and will provide facilities for two suites of offices.

COUNTY HOSPITAL INFIRMARY

Architect John I. Easterly of Santa Cruz is working on drawings for construction of an Infirmary Building to be built in

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conjunction with the County Hospital in Santa Cruz.

The building will be 1-story, with basement; reinforced concrete and light steel, metal lath and plaster interior.

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GEORGE F. BRADNER NAMED FHA AIDE

George F. Bradner, Los Angeles, has been appointed assistant FHA director of the Los Angeles office, according to announcement by Captain Norman M. Lyon, director.

Bradner has been serving as attorney advisor for the FHA offices at Los Angeles, Long Beach, San Diego, Phoenix, Honolulu, Denver, Albuquerque, and El Paso, previous to his appointment.

NEW COURTHOUSE FOR CALAVERAS

Architect E. Geoffrey Bangs of San Francisco is working on plans and specifications for construction of a new County Courthouse to be built in San Andreas for the Calaveras county Board of Supervisors.

The new building will be 2-story, plus basement; reinforced concrete construction and will contain 25,000 sq. ft. of floor area.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135. — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy, 50c.

ARCHITECT and ENGINEER Magazine OBSERVES ITS 50th BIRTHDAY

Col. E. M. C. Whitney, founder of ARCHITECT & ENGINEER Magazine, seated in his 1907 Winton automobile.

With this issue, November 1955, ARCHITECT & ENGINEER Magazine celebrates a half-century of serving the architectural and engineering professions, and the construction industry throughout the West.

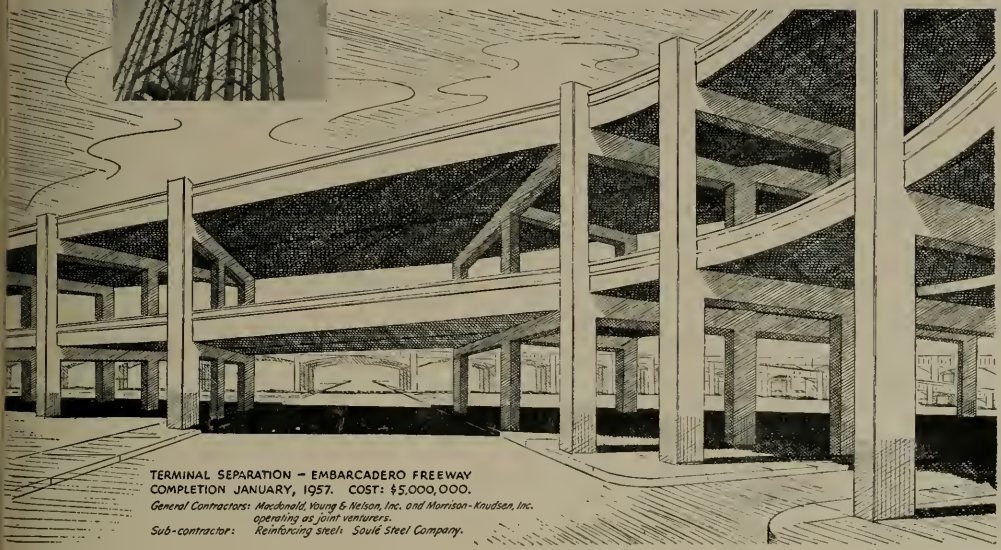
Fifty years is not such a long time, when measured in terms of the life of a giant Redwood tree, the history of mankind, or even the founding of the Republic of the United States, but, without question the past fifty years has been a most eventful period of time in which to conduct a publishing business.

Regular monthly issuance of the magazine has survived an earthquake and fire, two long World Wars, one major economic depression, and a number of lesser business recessions. But not without grave ramifications and complex problems.

During these great periods of national stress and serious emergency, a large number of loyal individuals, building material manufacturers, product distributors, and many others closely allied to the architectural and engineering professions, and the construction industry have lent their unselfish support and assistance to a sincerely appreciative management.

As the fiftieth birthday fades into the past, ARCHITECT & ENGINEER magazine, restates its pledge that in the future, as in the past, every effort will be made to better serve the Architects, Engineers, and Construction Industry; to create a more thorough understanding between the public and those we serve; and to make available the pages of each issue of the magazine to those who seek an outlet for publication of their work, service, or product, that others may be benefited.

Here you see one use of the big 2⅜" Di-Lok reinforcing bar. Eventually this column will reach nearly 90' (by butt welded splices), giving the name "skyway" to the project. At the time of this picture, the column approached 40'. *Below* is a sketch that catches the flowing, functional beauty of overlapping roadways.



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COMPLETION JANUARY, 1957. COST: $5,000,000.
General Contractors: Macdonald, Young & Nelson, Inc. and Morrison-Knudsen, Inc. operating as joint venturers.
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San Francisco's New "Skyway" Introduces

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1,100 tons of the 2⅜" reinforcing bars were supplied for the project. Much of this tonnage was rolled at the Pittsburg (Calif.) Works of United States Steel.

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NEWS and COMMENT ON ART

MUSEUM OF ART ADDS TO COMMUNITY LIFE

By DR. GRACE L. McCANN MORLEY, Director, San Francisco Museum of Art

Originally Published American Federation of Arts News Letter

The San Francisco Museum of Art celebrated in January its 20th anniversary in its present quarters in the Civic Center. The Museum could then look back on a tradition of art activity which, in many ways, has since determined its course. It developed from the San Francisco Art Association, founded in 1871 — only twenty-two years after the Gold Rush had made San Francisco a flourishing port—to bring art to the city and to exhibit the work of local artists. After the Panama Pacific International Exposition had successfully exhibited in 1915 Matisse, Picasso, Bonnard, Kokoschka, Marin and other contemporaries, as well as the Italian Futurist painters, the Art Association set up the San Francisco Museum of Art in 1916 in the Exposition's former Palace of Fine Arts. It was incorporated as an independent organization in 1921 and continued presenting loan exhibitions and local artists.

This history of changing exhibitions, and the development of two other museums for art in San Francisco, made it logical in 1935 for the Museum to specialize in temporary exhibitions and modern art. Impressionist painting, the European section, and selected Americans, from the 1934 Carnegie International, Braque, Picasso, Miro, Lurcat, Dufy and Kandinsky were exhibited the first year. The second year began with a review of Henri Matisse's art to that date in painting, sculpture, drawings and prints, borrowed principally from the Michael Steins who had returned to San Francisco from Paris a short while before. From that time, the course of the Museum was firmly set in modern art. There was a public for it; there were a few local owners; there was even a growing group to understand it and to show enthusiasm for it.

The Museum of Modern Art of New York, founded in 1929, had directed attention to modern art, and its sound growth was obviously an encouragement for the Museum here. By the 1930's the New York Museum was also circulating a good many of its large exhibitions. This Museum often brought them to San Francisco. Abstract and Cubist Art; African Negro Art; Fantastic Art, Dada and Surrealism; Picasso, Forty years of his Art, from the Museum of Modern Art were shown here between 1935 and 1940. The Mu-

---

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING, CIVIC CENTER

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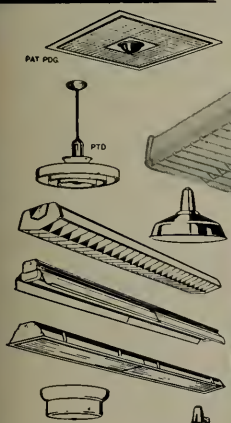

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seum continues exhibiting Museum of Modern Art exhibitions, like the Matisse and the Fauves, by joining in their sponsorship. Such scholarly exhibitions, with their thorough documentation and authoritative catalogues, provide a firm framework for the Museum's own exhibitions of international leaders and movements, while the Art Association Annuals and other exhibitions, primarily of art of the area, bring the international trends into local focus.

The San Francisco Museum of Art not only exhibits contemporary art, but has a collection of it, a reference library for it, and a regular program of exhibitions and activities, including films, photography, decorative arts, and educational courses centered on the subject. It gives much attention to art of the area, and, its downtown location, its regular evening hours and its good small auditorium, and meeting rooms used for concerts, poetry readings and lectures, have made it a cultural center for the city.

CALIFORNIA PALACE LEGION OF HONOR

November exhibition will be highlighted by Textiles, Photography, Painting and Watercolors, and Sculpture. Museum is open daily, Lincoln Park, San Francisco.

SAN FRANCISCO MUSEUM OF ART

Young American Painters, 19th Annual Watercolor Exhibition of San Francisco Art Association, 30th annual exhibition San Francisco Women Artists, and the White Room, will highlight the November calendar of exhibits. Open daily, War Memorial Building, Civic Center, San Francisco.

M. H. deYOUNG MEMORIAL MUSEUM

San Francisco Young Children's Art Show, Experimental Projects of art and architecture, and showing of Society of Western Artists, feature November exhibits. Golden Gate Park, San Francisco, open daily.

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park, San Francisco

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By W. WESLEY HICKS

President, Wesix Electric Heater Co.

In an earlier article I wrote for Architect and Engineer, my purpose being to emphasize the established facts concerning load characteristics of carefully engineered controlled electric heating in which the radiation and convection components were acceptably balanced. Now more than two million of these heaters are in use and electric heating is accepted across the continent.

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But more important to the electric utilities, the consumers, and the industry, is the discovery of a simple, safe means for generating, separating and controlling air ions, using ordinary house current and Wesix standard heaters to generate negative air ions and to control unwanted excessive positive ions. (U. S. Patent 2,589,613.)

The generation and use of negative air ions for therapeutic purposes is an old art in Europe, but the means for producing the ions have been clumsy, costly, and hazardous, using voltages as high as 60,000 which also produces undesirable ozone and nitrous oxides.

Although we had known for a long time that negative air ions have a therapeutic effect on human health and that positive ions had the opposite effect, we knew the importance of establishing the facts by controlled experiment directed by recognized, competent physi-

(See page 12)

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Donald G. French, Architect, San Jose, Cal.

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- Neoprene glazing strip for quick, sure glass installation.

Michel & Pfeffer Iron Works, Inc.

212 Shaw Road, South San Francisco, California

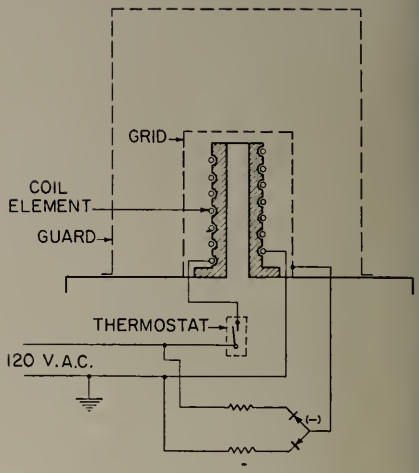
ELECTRIC HEATING . . .

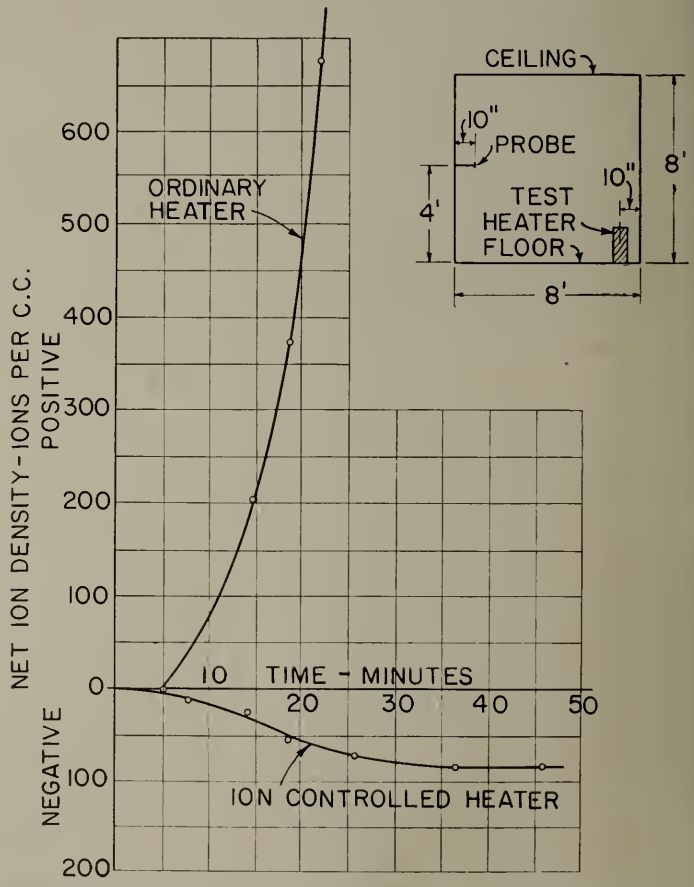
(From page 8)

cists, biologists, chemists, and medical scientists in universities and medical schools, and we have sponsored a costly series of experiments at Stanford, UC, USF, and at several eastern university medical schools. The results of the experiments, many of which have been completed, are now being reported in appropriate medical and scientific journals, and our own empirical conclusions are confirmed as in the literature.

J. C. Beckett, reporting to the American Institute of Electrical Engineers, (Transactions, Part II, September 1954), points out that improved measuring technique has added impetus to the study of ionized air and its effect on human health and comfort. He further indicates that control of atmospheric ions can be provided

(See page 14)





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were architecturally achieved in the construction of the fabulous

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To provide room-guests with an experience in California outdoor living—the adjoining balconies were made private by PORCELAIN ENAMEL double-faced laminated panel separators.

•

Exterior appearances of these PORCELAIN ENAMEL panels—in varying colors, ranging from light pastel shades to dark blues and dark browns—greatly add to the striking, colorful effect of this world-famous Beverly-Hilton.

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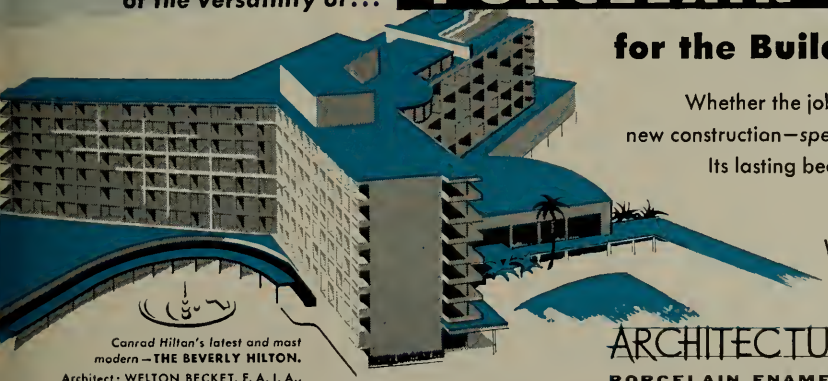

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(From page 12)

by conventional air conditioning equipment but not by filtering alone and that some ion generation must be provided to introduce negative ions into the air.

Howard Murphy, writing for Heating, Piping and Air Conditioning for October 1954, points out that only by the generation of negative air ions can the ion density be maintained at the comfort level in an air conditioned room. He calls negative air ions the "missing link" which serves to overcome the tendency of occupants of an air conditioned room to complain of stuffiness and other symptoms. The positive ions must be eliminated or overbalanced with negative air ions. Air conditioning is incomplete without ion generation and control.

Professor C. E. Clifton, Stanford, reporting to AAAS for Science, shows the bactericidal and sporicidal action of Wesix radiant convection ion controlled heaters. He shows that bacteria count in a room is reduced at the rate of 50 per cent per hour.

Glenn W. Todd, Superintendent of the Tillamook, Oregon schools, writing for the Electrical West, reports a better attendance in schools heated with automatic controlled heaters in which we have combined negative ion generation and positive ion control.

Results being reported from other schools and churches indicate better attendance together with evidence of prevention of illneses caused by airborne bacteria, viruses such as colds, flu, and possibly polio.

While air ion control is a "natural" for Wesix electric heaters, a number of conventional air conditioners have been equipped with ion control thus illustrating its practical application in air conditioning and air cooling.

I believe that this new development is of paramount importance, not only in electric heating, but to fuel heating, cooling, air conditioning, and particularly to human health.

There are greater days ahead for the electric heating industry and negative air ions will make it still greater.

INTERIOR VIEW—Typical High School installation including ION-controlled automatic electric heating equipment.

NEW ULTRA MODERN OFFICE BUILDING FOR PACIFIC MUTUAL LIFE INSURANCE COMPANY

This is a construction view of the eight story reinforced concrete office building at California and Kearny Streets, San Francisco, being built for the Pacific Mutual Life Insurance Company.

This spectacular structure has an exterior of glass and green Terra Cotta and a two story base finished in black emerald pearl Swedish Granite.

Loubet and Glynn are the Architects.

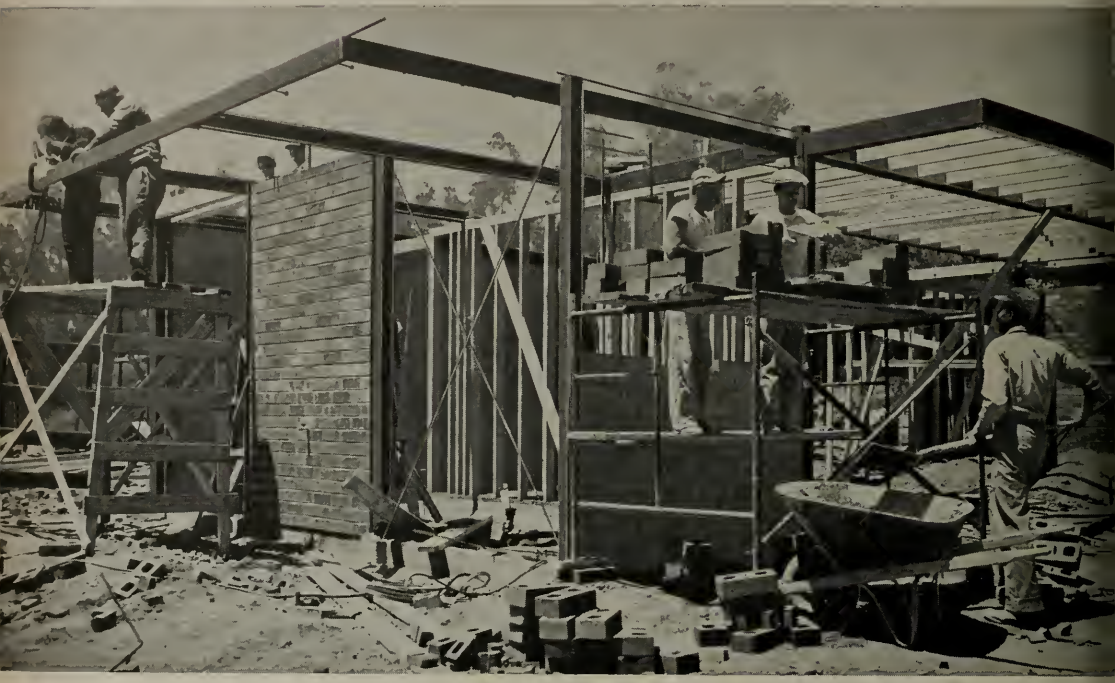
MACDONALD, YOUNG & NELSON, INC.

General Contractors

351 CALIFORNIA STREET • SAN FRANCISCO 4, CALIFORNIA • YUkon 2-4700

A look at the newest of the new steel ho

Steel is proving it can serve the family in a functional, liveable way. In reporting the findings of a re tects and builders who have pioneered the use of steel-for-homes, it is difficult to avoid superlativ The structural advantages of steel framework begin on the drawing board, where they allow *grea flexibility of design.* Replacing bulky timbers, lightweight steel beams can span the width of a hou without interior support. Thus relieved of their traditional load-bearing role, "walls" can become fr standing cabinets or even movable partitions. With fewer supporting members, important *mater savings can be realized* ... read how steel helped designer Craig Ellwood economize. Furthermo *steel framework is fast and easy to erect:* a welding team makes short work of the entire job.



THIS STEEL HOME...

open for inspection, November through December.

Address: 9554 Hidden Valley Rd., Beverly Hills, California.

Steel's contribution to good design is seen in this series of construction photos. A modular stee frame designed to withstand all forces forms the structural system of this Beverly Hills home. Th designer, Craig Ellwood, selected steel for strength, permanence of form, its fine line, and minimum maintenance. The steel system reduced the amount of lumber needed, both in size and quantity wood beams would need to be four times the size of the steel beams used ... and more than three times as heavy.

PUT YOUR NAME ON THE LIST to receive free technical information on the use of steel in residential design and building. Write Architect and Engineer Service, Columbia-Geneva Steel Division, 120 Montgomery Street, San Francisco 6, California.

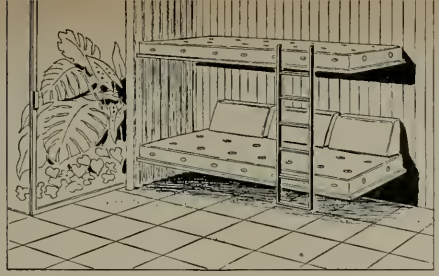
4" H-13# columns and 5"-I-10# beams make up the modular steel frame. The fascia is 5" channel 6.7#. Welding these members took only four minutes.

The rhythm of the framework is carried out in the division of space and again in vertical elements. Room partitions are on the module or mid-module.

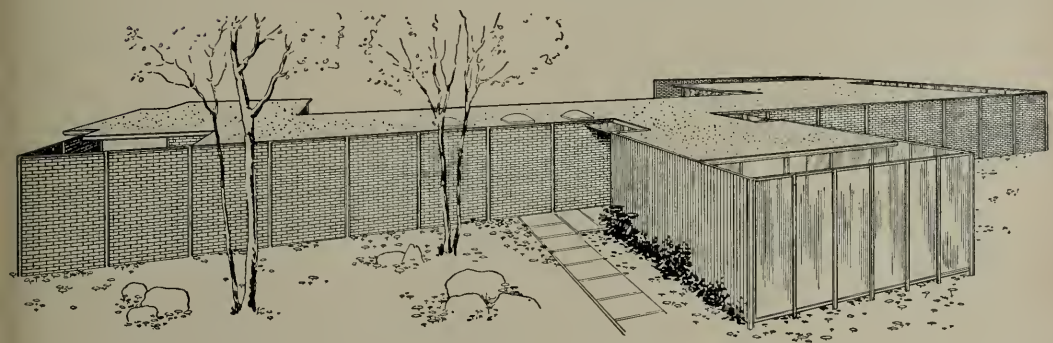
Cantilever columns and concrete pad footings allow openness of structure. This also allowed the omission of costly formed footings.

Steel figured prominently in other phases of construction: Children's beds (see drawing) are cantilevered from the walls with 2½" steel channels. ⅛" steel sheet was used for the wall and other parts of a built-in barbecue (masonry wall construction usually requires 8" thickness). All materials for this project were selected by the designer on a "Merit Specified" basis.

Designed by Craig Ellwood
Consulting Engineers—
Mackintosh and Mackintosh
General Contractors—
David E. Harper



As the basic element of the architecture, all steel columns are exposed—giving a consistency to the design expression. 6" terra cotta clay blocks contrast nicely with black-painted columns. Columbia-Geneva Steel Division, United States Steel Corporation, supplied steel for the project through Drake Steel Supply Co., Los Angeles. Fabrication by Raymond Welding and Equipment Company.



Western homes of the future are now building with steel... **UNITED STATES STEEL**

ARCHITECT & ENGINEER MAGAZINE

FIFTY YEARS 1905 - 1955

OF SERVING THE WEST'S ARCHITECTURAL, ENGINEERING AND CONSTRUCTION INDUSTRY

By FRED W. JONES

The first number of ARCHITECT AND CONTRACTOR, subsequently renamed ARCHITECT AND ENGINEER OF CALIFORNIA, was published in May 1905. The magazine was then the standard size of most monthly periodicals, 6½ inches wide by 10 inches deep. The publisher was Col. E. M. C. Whitney of Cleveland, Ohio, who came West soon after disposing of his interest in the Ohio Architect. The Colonel, by the way, earned his title while a member of the National Guard.

Every effort has been made to include in this narrative the more important events and undertakings recorded in the magazine from year to year. It is possible, of course, that there have been oversights, also in listing projects the reader may differ with the writer in the importance of his selections. Naturally it would be impossible to spot every major project completed over the years, primarily for want of space and, secondly, for lack of picture material. Misplaced or destroyed photos have made it necessary to reproduce some of the illustrations from the bound volumes of the magazine.

The Architect and Contractor
of California
MAY, 1905
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We carry one of the largest and best stocks in San Francisco.
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FOR DRY FINISH THAT WILL NOT SHRINK SPECIFY
ALBION LUMBER CO.
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ALBION LUMBER COMPANY
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SUBSCRIPTION PRICE
ONE DOLLAR PER YEAR
The Architect and Contractor of California
SAN FRANCISCO and LOS ANGELES, CAL.

In its half century of continuous publication the magazine has weathered numerous trying times—earthquake, fire, depression, two world wars, competition, and a succession of minor events. It has published many fine issues as well as some not so good. That happens with most all publications. It has made friends as well as enemies. One cannot please everybody all the time but you can please somebody part of the time.

There are few, very few, architects and engineers practicing today who were leaders in their profession 50, even 40 years, back. The same goes for the building trades, contractors, and the suppliers of building material. A new generation is fast taking hold, just as a new style of architecture and improved building methods have come into being.

Two small rooms on the second floor of the building at 215 Sansome Street, San Francisco, served as the magazine's first headquarters, continuing until the April 1906 earthquake and fire when the building and contents were totally destroyed, including valuable subscription lists, advertising contracts and unused manuscripts.

First Issue

To go back to 1905, the first number of the magazine contained 72 pages, 28 illustrations of mediocre buildings with possibly one exception—an architect's

FIRST COVER — Vol. 1, No. 1
Strictly modern in 1905.

perspective of the Monadnock Building, designed by Frederick H. Meyer and Smith O'Brien for the owner, Herbert Law. The contractor was the American Hawaiian Engineering and Construction Company, headed by the late Frederick J. Amweg.

The same issue carried three small advertisements on the front cover, the latter void of design other than the name Architect and Contractor. The three advertisers were the Wright Hardware Company, no longer in business; the Albion Lumber Company (ditto) and the Pacific Portland Cement Company, the latter only lately consolidated with the Ideal Cement Company of Denver, Colorado. Other firms whose messages appeared in this issue and which are still in business were the Guilfoy Cornice Company and the Pacific Fire Extinguisher Company.

In his publisher's announcement Colonel Whitney stressed the need for such a magazine (The Architect and Engineer) to stimulate building, encourage good architecture and champion sound construction. His message was highly optimistic for the future growth of San Francisco and the West Coast. (His predictions have never been questioned.)

A perspective of the Fairmont Hotel by Reid Bros., architects, made an attractive frontispiece in the July issue. Reid Bros., who later designed the Call Building, were listed with a few other architects of prominence, including Albert Pissis, who designed the Flood Building, Arthur Brown, Jr., who, with John Bakewell, designed the new San Francisco City Hall after its destruction in the 1906 earthquake; William Curlett, architect of the James Phelan Building;

REBUILT—Stands among nation's outstanding civic buildings. (Bakewell & Brown, Architects.)

San Francisco CITY HALL following the earthquake and fire—1906.

SMALL SCHOOL

in Dutch style of orchitecture—brick veneered with concrete block trim.

W. H. Weeks, Architect.

Bliss & Faville, winners of the Civic Center State Building competition; Willis Polk, architect of many monumental structures throughout the Bay Area; Lewis P. Hobart and George W. Kelham.

Name Changed

With the March 1906 issue, the magazine's name was changed from Architect and Contractor to Architect and Engineer of California. It was in this number that Architect Charles F. Whittlesey of Los Angeles contributed a perspective of the Pacific Building at Market and Fourth Streets. It is one of San Francisco's first office buildings to be constructed entirely of reinforced concrete. Later Architect Whittlesey designed the famed Los Angeles Auditorium at Fifth and Olive Streets in that city, another outstanding example of this type of construction.

Some of the San Francisco structural engineers who pioneered for reinforced concrete and whose names appeared in early issues were the late John B. Leonard, with whom were associated Edwin L. Soule, later to organize the Soule Steel Co.; Will P. Day, still practicing as Will P. Day and Associates, architects and engineers; H. J. Brunnier, Maurice Couchot, L. H. Nishkian, T. Ronneberg and Wilhelm Adrian.

Many of the above mentioned architects and engineers were listed as associate or contributing editors as early as the March 1906 issue, which incidentally named the writer as the magazine's editor. Now one year old, the book was fast gaining in prestige and circulation. Little did the publishers realize how soon disaster would fall.

Earthquake and Fire

The April 1906 (first anniversary number) was on the press and would have been in the mail in a few

OLD PALACE HOTEL

Gutted by fire of 1906.

Replaced by building recognized as among nation's greatest hotels.

days, when earthquake and fire struck at 5 a. m., April 18th. It was two days later before Col. Whitney and his associates were located. The writer, in Fresno arranging for an issue for Fresno architects, received the news of the disaster in the office of the Fresno Republican. Hurrying back to San Francisco, we located the Colonel in the Oakland office of Architect A. W. Smith. From there we ferried to San Francisco, hoping against hope that there might be something left of office and print shop. There was nothing.

Dejectedly the writer turned to his boss and lamented:

"Colonel, I guess this is the end of Architect and Engineer."

The Colonel's eyes sparkled, his voice was firm, convincing' "You are wrong," he said cheeringly, "it's just our beginning. San Francisco will rebuild with better and more beautiful buildings and Architect and Engineer will grow and prosper."

With this comforting prediction the Colonel led us to the Wells-Fargo Nevada Bank Building at Market and Montgomery Streets, completely gutted except the basement safe deposit vault, which was open for business. Identified, the Colonel produced a key to a safe deposit box, opened it and, to our astonishment, its contents revealed over $5,000 in gold coins—twenties, tens and fives—legal tender in those days. That we were amazed is putting it mildly. There appeared to be ample funds to meet the magazine's immediate financial needs, as well as its future operations.

The huge stack of gold represented the proceeds in part from the sale of Colonel Whitney's Ohio Architect.

Spring Valley Water presents new design.

Willis Polk & Co., Architects.

NEW MONADNOCK BUILDING

First major building constructed following the 1906 earthquake and fire.

Fred H. Meyer and Smith O'Brien Architects.

Architectural Rendering of a newly designed PIEDMONT BUNGALOW

William Knowles, Architect.

Sketch of a Piedmont Bungalow William Knowles, Architect

Building Activity Starts

May, June and July, following the earthquake and fire, were months of unbelievable building activity, with architects and contractors working day and night. Meanwhile, the magazine made a fresh start with its headquarters in the Monadnock Building. Practically all of the May issue was devoted to technical articles and pictures of buildings structurally damaged by either earthquake or fire.

Photos of the San Francisco City Hall and the

U.S. PRESIDENT William H. Taft lays cornerstone of new Young Men's Christian Association building in San Francisco on October 5, 1909. Lindgren & Swinerton were the builders. McDougall Bros., Architects.

Today's
PALACE OF FINE ARTS

Reminiscent of the Panama Pacific International Exposition held in San Francisco, 1915.

Bernard R. Maybeck, Architect.

Palace Hotel are reproduced here from the original cuts. Also shown with this article is the W. B. Gester residence in Berkeley, built of reinforced concrete and immune to damage from the seismic disturbance. Another house which fared similar good fortune was the reinforced concrete home of Henry Gervais in San Francisco, erected only a few months before the quake.

First issue of the magazine to feature an architect's work in detail was in August 1906. Structures designed by William Binder (present firm name, Binder and Curtis) included San Jose's first skyscraper, an eight-story bank and office building for the Garden City Bank and Trust Company. The building still stands, fully tenanted.

Late in 1906, the D. H. Burnham plan for the beautification of San Francisco was an all-absorbing topic with the layman as well as the professions. An historical sketch by former Mayor James D. Phelan was used to stimulate interest in the plan prepared by Mr. Burnham and Edward H. Bennett and eventually approved by Mayor Eugene Schmitz and the Board of Supervisors, yet never carried out.

This same year residence design turned to bungalows and for quite some time this type of domestic architecture continued the rage. Una Nixon Hopkins described the beauties and livability of the bungalow which, she wrote, "has found favor with people who, like the man on being asked what kind of a house he lived in, exclaimed laconically: 'In a barn; but thank Heaven I know my own front door!' There is no postage stamp repetition about them."

Country School Houses

In striking contrast to our present school architecture were the small country schools built in the early nineties. (See cut of front elevation of a one room school house designed by the late W. H. Weeks, published in July '06). Mr. Weeks wrote:

"In the small country school, as well as the schools of the large cities, the best examples of architecture should be seen. They should have beauty, grace and dignity."

The July 1906 issue showed a perspective of the Lunig Building at Market and Drumm Streets, today known as the Fife and dubbed by columnists, "the Fife and Drumm Building." A perspective of the Hotel Claremont, designed by C. W. Dickey, was shown in the preceding June issue.

In September 1906, this magazine devoted pages to the old California Missions and their influence on modern design in the early nineteen hundreds. Examples illustrated included a church in Los Angeles, the Riverside Hotel, Southern Pacific station at Albuquerque, N. M., and several Los Angeles residences.

The October 1906 number featured a portfolio of perspectives of new buildings soon to be erected in the San Francisco metropolitan area with this lyric from an unidentified author:

"Up from its embers,
The blackened and charred
Fagots of stricken glory,
Arises the hope, the power,
The undaunted spirit of sons of the West"

November 1906 told of the partial collapse of the Bixby Hotel in Long Beach.

A spirited competition for a new Bank of Italy building (now Bank of America) was held in November 1906 with the following contestants: Frank T. Shea, Ralph Warner Hart, Sutton & Weeks, L. Mastropasqua, Charles Paff & Co., Stone & Smith, Loring P. Rixford and William Mooser and A. M. Milwain. The winner turned up in Frank T. Shea, the specifica-

Distinctive Trend in elementary school construction was the

SANTA PAULA GRAMMAR SCHOOL

Santa Paula, California

Designed by Withey & Davis, Architects.

tions calling for a ten story structure to cost $120,000.

April 1907 featured a group of bank and office buildings by L. B. Dutton, including the Metropolis Trust & Savings built on the site of the old Grand Hotel; the Mechanics Savings Bank, San Francisco, and First National Bank, Oakland, now the American Trust. May 1908 featured the work of T. Paterson Ross and A. W. Burgren, who specialized in Chinese architecture, notable examples being the Sing Fat and Sing Chong buildings in Chinatown.

A competition for a new home for the Pacific Union Club, San Francisco, resulted in the selection of the design submitted by Albert Pissis, whose plans were published in the June 1908 issue. Second choice was awarded MacDonald & Applegarth and third, Sutton & Weeks.

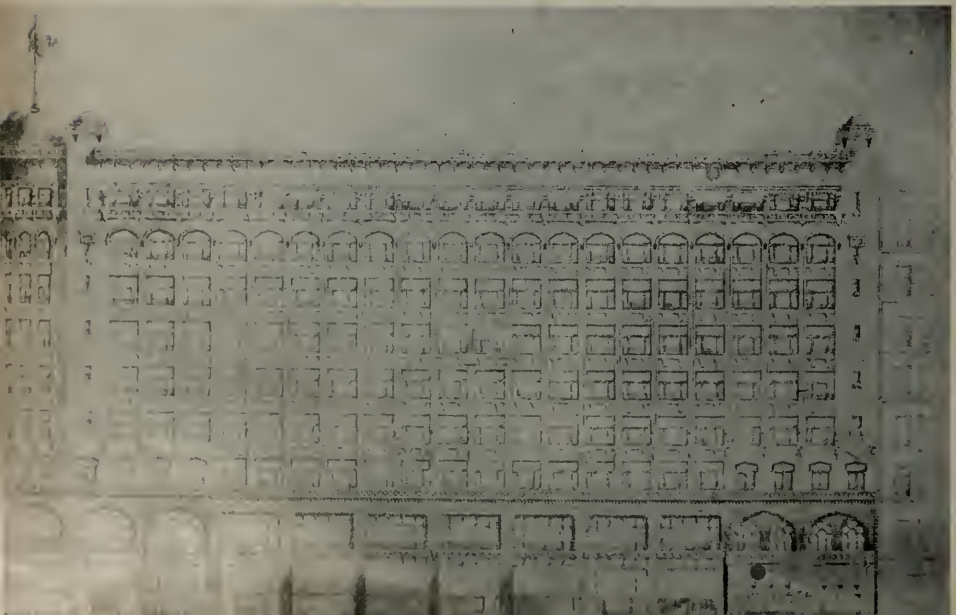
New Cover—New Office

A change in cover design was adopted in 1909 and the same year a branch office was opened in Los Angeles. That year the sanitary drinking fountain was a topic for public discussion and Horatio F. Stoll wrote of San Francisco's lack of fountains, illustrating his article with photos of Lotta's fountain, the Robert Stevenson fountain in Portsmouth Square and the old Cogswell fountain at Market and California Streets.

January '09 carried a full page advertisement of the Winton Motor Carriage Co. (Col. Whitney was probably the first San Franciscan to drive this make of car).

First advertisement of the S. T. Johnson Oil Burner Co. was printed in May 1909. Since then the firm has been a consistent client of the A & E which, by the way, lost a good friend in J. C. Johnson, son of the founder, who, less than two years ago, fell from a

PACIFIC BUILDING, 4th and Market, San Francisco, ushers in another era of architectural design. Charles F. Whittlesey, Architect.



tree which he was pruning at his country ranch and died from his injuries.

Oakland's once famed Idora Park was fully described in September 1909. Most of the buildings were in the Mission style and were designed by William L. Woollett, who later prepared the plans for several notable structures in the Bay region and Southern California.

A summary of the First Annual Convention of the Architectural League of the Pacific Coast was reported in November 1909. The opening session was held October 18 in the Monadnock Building with Cass Gilbert and Irving K. Pond, eminent Eastern architects, guests and James D. Phelan delivering the address of welcome. The second day's session was held in the Greek Theater, Berkeley. During the convention the San Francisco Architectural Club sponsored a fine exhibition by Northern and Southern California architects.

Another change of cover appeared in 1910 when "Pacific Coast States" was added to the name Architect and Engineer of California.

A birdseye view of the San Jose State Normal School was shown in the August 1910 issue; also shown in that number was the Oakland City Hall, Palmer & Hornbostel, architects; John J. Donovan, associate.

November 1910 featured the work of Reid Bros. Showed portraits of James W. Reid and Merritt J. Reid and listed as some of their best work the Hotel Del Coronado, Claus Spreckels (Call) Building, Davis, Hughes, Butler and Drexler Buildings, San Francisco; The Yeon and Oregonian Buildings, Portland.

Famed St. Mary's College Chapel
John J. Donovan, Architect

NEW in Industrial Design was the SCHUCKL CANNING Company of Sunnyvale, California. Designed by William W. Wurster, Architect.

In 1910 the Sutter Hotel was erected by G. P. W. Jensen, pioneer San Francisco contractor, the firm still doing business as G. P. W. Jensen & Sons, Inc., at their original Market Street address.

A. I. A. National Convention

A splendid display of photos and drawings selected from the San Francisco Architectural Club's Annual Exhibition, was published in January 1911, the month the American Institute of Architects convened in San Francisco. August Headman, retiring president of the Architectural Club, described the exhibition and praised the jury which was composed of W. B. Faville, Louis C. Mullgardt, Frederick H. Meyer, John Bakewell, Jr., Charles Peter Weeks, Walter Parker, Thos. Bendell, H. E. Nye, John W. Bagley, Jr., and Geo. A. Thibault.

The November 1911 issue contained an address by Irving K. Pond, president of the American Institute of Architects, on "Art and Individuality" emphasizing the architect's appreciation of true art and his desire to give true expression to it in his work. The winning plans in the Portland Auditorium competition by J. H.

PACIFIC TELEPHONE & TELEGRAPH
San Francisco main offices
Miller & Pflueger, Architects

OAKLAND MUNICIPAL AUDITORIUM . . . John J. Donovan, Architect.

Freedlander and A. D. Seymour of New York were published in this same issue which, incidentally, carried a new cover design by Willis Polk (the classic Water Temple at Sunol).

Many of San Francisco's finest buildings today are examples of the type of work turned out by Frederick H. Meyer and Smith O'Brien, practicing as Meyer & O'Brien up to January 1908 when the partnership was dissolved. Buildings by these architects were pictured in February 1913 and included the Humboldt Bank, Rialto, Hastings, Monadnock, Looker & Lent office buildings; Knights of Columbus Hall, Youth Directory, Anglo Bank, etc.

Mr. Meyer today is associated (inactive) with the firm of Meyer, Evers, Ashley, Keyser and Runge. Their latest project, just completed, is the $3,500,000 Lucky Lager brewing plant, one of the largest and finest of its type on the Coast.

Architects Official Magazine

In March 1913 the magazine was voted the official organ of the San Francisco Chapter, A.I.A., and a letter, so stating and signed by Sylvain Schnaittacher, secretary, was published.

The Fourth Annual Exhibition of the Architectural League of the Pacific Coast was publicized in this same issue, as was the banquet of the San Francisco General Contractors Association, marking its second anniversary.

One of the magazine's oldest and most consistent advertisers had its initial insertion in this same March issue. L. Haws announced to the architectural profession a perfected sanitary drinking cup for schools, public buildings and parks.

A collection of preliminary drawings and models of the Panama Pacific International Exposition buildings was published in April 1913 with comments by the late B. J. S. Cahill.

RUSS BUILDING — San Francisco
George W. Kelham, Architect

In May 1913, the magazine featured the work of MacDonald and Applegarth. The portfolio comprised such notable buildings as the Holbrook, Hineman,

TREASURE ISLAND

Site of the Golden Gate International Exposition — San Francisco Bay. 1939-1940

Moore-Matson, Pacific Union Club and the Rudolph Spreckels residence.

For a frontispiece in July 1913 a pencil sketch of the new San Francisco Civic Center was used, the buildings shown being the City Hall, Auditorium, Opera House and Plaza. Bonds in the amount of $8,800,000 having been voted, the plans were ordered developed by an architectural commission composed of John Galen Howard, Frederick H. Meyer and John Reid, Jr.

The late Charles Peter Weeks told how his firm won the Alameda County Hospital competition in the August 1913 issue.

SAN FRANCISCO-OAKLAND BAY BRIDGE
Outstanding example of engineering skill.

Urge Better School Design

School architecture in California was described in August 1914 with some excellent examples of school buildings, classed by the authors as "a highly specialized business." To encourage better school design the Department of Public Instruction, State of California, appointed a jury to select a few outstanding examples. This committee was composed of Lewis P. Hobart, Charles S. Kaiser and C. H. Cheney of San Francisco, John W. Woollett, then State Architect, and John J. Donovan of Oakland. The Santa Paula Grammar School by Withey & Davis, Los Angeles, was one of the buildings to be named "excellent" by the jury. (See cut.)

Practically the entire December 1914 issue was devoted to the Panama Pacific International Exposition. A book of nearly 200 pages was published in May 1915, featuring the work of William H. Weeks, who, old timers will recall, designed many of the State's public schools and Carnegie Libraries in the early 19 hundreds.

The San Francisco Public Library and the Civic Center State office building competitions proved of absorbing interest to the profession, particularly the Library contest, which was judged by two prominent Eastern architects, Paul Cret and Cass Gilbert, and former Mayor James D. Phelan. The jury gave first choice to Geo. W. Kelham, who later was appointed U.C. architect in addition to being retained to design such notable structures as the Russ and Shell Oil both monumental office buildings of sky-scraper proportions.

A two page insert containing building material cost prices has been a popular and informative feature of the magazine since August 1919, at which time it was announced the department would be made a permanent feature.

GOLDEN GATE BRIDGE

One of the world's most famous engineering projects.

Modern know-how and modern products made construction possible.

The climax of Colonel Whitney's failing health came on Friday, November 19, 1915, when he passed away at his Redwood City home, to be succeeded in the management of the magazine by his widow, Annie I. Whitney.

Under New Management

In April 1920, W. J. L. Kierulff and brother, T. C. Kierulff, assumed control of the magazine and the editorial page of June, that year, announced the forming of a corporation headed by W. J. L. Kierulff, president and manager; Frederick W. Jones, vice president and editor; L. B. Penhorwood, secretary-treasurer; T. C. Kierulff, attorney. Ownership has continued to be controlled by the Kierulff family.

August 1922 featured the work of James Osborne Craig of Santa Barbara. The late Irving Morrow described Mr. Craig's houses as outstanding for their originality and beauty. In all of his drawings the Spanish influence predominated. Santa Barbara to this day is world famous for this style of architecture, reflected in its public buildings, commercial structures and residences. "Combined with a variety and a free play," Mr. Morrow wrote, "this individuality leads one to venture we are, indeed, witnessing the birth of a California 'style' in the larger sense." Mr. Morrow titled his story, "A Step in California's Architecture." More than 60 cuts illustrated Mr. Craig's work, including a collection of inspirational studies of the De Le Guerra Plaza, submitted for the Community Arts Association, models of the beautiful Bernard Hoffman home, St. Anthony's College, apartment house group, etc.

A Weeks and Day number was published in July 1923 with comments by Mr. Morrow. The work included the firm's competition plans for the State Library and Courts Building, Sacramento, Hospital for Crippled Children, San Francisco, model of Sacramento-San Joaquin Bank, competition drawing for the Chicago Tribune Building, Loew's State Theater and Fox Theater, Oakland, Huntington Apartments, Chronicle Building, and sales room for Don Lee, San Francisco.

Some of the ruins of the disastrous Berkeley fire were pictured in October 1923, with an informative article by Walter T. Steilberg, describing a new type of fireproof construction developed by him.

A striking photo of the 26-story telephone building, New Montgomery Street, San Francisco, by Miller & Pflueger and A. A. Cantin, Associated, was used as a frontispiece in December, 1925, together with some 30 cuts of the building, including floor plans, progress pictures and details. Mr. Cahill's comments lent added interest to what he termed "a structure of colossal dimensions and an architectural event of first magnitude."

The same year (1925) the Sacramento Elks building, Fresno Bee and other prominent structures in the Sacramento area by Architect Leonard F. Starks were shown.

Change of Format

April 1927 marked an important step for Architect and Engineer, the change of its format from the so-called "pocket size" to the present standard size page, 8½" x 11½". The change followed a popular demand

San Francisco's

OPERA HOUSE

Architecturally distinct, and birthplace of the United Nations.

Bakewell & Brown, Architects.

of readers and advertisers, and the publishers were soon rewarded by a substantial increase in advertising patronage. A fresh cover design added to the prosperous appearance of the book and thereafter the cover picture was frequently changed to tie in with the contents.

Profusely illustrated in September 1927 was the Russ Building, which at the time was classed as "one of the nation's largest and most beautiful office structures." A three-color frontispiece, reproduced from a water color by Jess Stanton, lent added interest to the vast collection of photographs and descriptive material.

The latest Honor Awards of Washington State Chapter, A.I.A., were published in December 1927. Listed were many notable buildings in the Northwest, including the Olympic Hotel, Seattle, University of Washington Library, Seattle National Bank, Metropolitan Theater, Seattle, and the Henry Art Gallery, University of Washington.

Largest issue of the magazine, at least in point of advertising material, was published in April 1928. The book contained 172 pages and featured some of the best examples of house design of that period. Contributing architects included Paul R. Williams, R. C. Flewelling, Roland I. Stringham, Carleton M. Winslow, Geo. B. Kaufmann, John K. Branner, Roland Coate, Reginald Johnson, Clarence A. Tantau, Morrow and Morrow, Sidney and Noble Newsome.

John C. Austin, John Parkinson and Albert C. Martin were named in the May 1928 issue as the architects of the new Los Angeles City Hall which was illustrated in detail. Other Los Angeles architects whose work appeared in later issues of the magazine were Allison and Allison, Alfred F. Rosenheim, Myron Hunt and Elmer Grey, Robert H. Orr, Morgan, Walls and Clements, and Marsh & Russell.

Because of its unusual architectural treatment, the Earl C. Anthony auto sales building in Oakland—Bernard R. Maybeck, architect—was given considerable space in February 1929.

Continuation of a series of etchings of the Franciscan Missions by Henry Chapman Ford made an interesting feature of the March 1929 issue which also contained an announcement of a new department to be edited by William I. Garren and captioned: "A Portfolio of Modern Art and Architecture."

Schools and Adobe Houses

Elmer Grey appraised the work of Reginald D. Johnson, Los Angeles architect, in April 1929 and the following month John J. Donovan wrote a complimentary review of the school work turned out by Messrs. Symmes and Cullimore of Bakersfield. In a later issue Mr. Cullimore contributed photos and text matter of several adobe houses he had designed. Elmer Grey's Pasadena Play House was described in the June number, 1929, as was the house of Mrs. F. W. Hunt in Palo Alto, John K. Branner, architect. A Branner home was also illustrated in a previous issue (May 1925) along with a collection of houses by such well-known architects as G. Albert Lansburgh, Dean and Dean, Guy L. Brown, Henry F. Withey, Birge Clark, Henry H. Gutterson, Miller & Warnecke, John Byers and Roy Sheldon Price.

A detailed presentation of the Santa Barbara Court House in July 1929 was acclaimed an outstanding number for that year. Writer MacLean Finney stressed the architect's fine feeling for Spanish detail. William Mooser, still semi-active in the practice of his profession, and associates, were the architects.

The second annual Honor Award exhibition of architects' work held in the de Young Museum, Golden Gate Park, was given a lengthy review in August 1929. John Dinwiddie prepared a pencil sketch of the San Francisco City Hall for the cover and accompanying the text were photos and drawings by: Willis Polk, Wm. W. Wurster, Henry Gutterson, W. H. Ratcliff, Jr., Blaine and Olson, Birge Clark, Dean and Dean, Albert Farr and J. Francis Ward, Reed and Corlett, Geo. W. Kelham, Fred Reimers, C. W. McCall and Arthur D. Janssen.

The Posey vehicular tube between Oakland and Alameda was described in September 1929 by its designer, Geo. A. Posey. The tube was actually completed in 1928 at a cost of $5,000,000, a sum that probably would have to be duplicated if built today.

Another fine issue of the magazine came out in September 1929, featuring the work of John J. Donovan. James S. Dean, Sacramento architect, wrote the tribute to Mr. Donovan's St. Mary's group of college buildings at Moraga.

John Byers was named in the November 1929 issue as one of the West's foremost authorities of adobe construction, especially as used in domestic architecture. Describing some of Byer's houses, Marc N. Goodnow had this to say in favor of adobe construction:

"While every permanent material of which houses are built may have written its own romance through the ages, it is doubtful if any can lay claim to a more romantic past than the very simple, sun-baked mud-brick commonly known as adobe, or as the Mexicans still call it, the adobero."

Use of Common Brick

The use of common brick in modern versions was demonstrated in this same November issue with photographs of the Shrine Hospital, San Francisco; the Bellevue Staten Apartments, Oakland; Sigma Pi Fraternity, Berkeley; Oakland High School and the residence of S. G. Hinds, San Francisco. Architects of these buildings in the order named were: Weeks & Day, H. C. Baumann, Frederick H. Reimers, Miller & Warnecke and Edward S. Bolles.

Robert Gordon Sproul, president of the University of California, wrote of "The Architect and the University" in October 1930 and reviewed some of the new buildings on the University campus, including the Life Science Building and International House, Geo. W. Kelham, architect; Infirmary, Arthur Brown, Jr., and Giannini Hall, Wm. C. Hayes, architect. H. J. Brunnier, C.E., described some of the structural aspects of the buildings.

In this same issue editorial announcement was made of a new department to be presided over alternate months by four prominent West Coast architects who were free to comment on architectural subjects in their respective bailiwicks. These editors were W. C. Hayes, San Francisco; Carleton M. Winslow, Los Angeles; Harold W. Doty, Portland, Oregon, and Charles H. Alden, Seattle, Wash.

Northwest Architecture

Some recent work by Seattle architects was displayed in the February 1931 issue, including St. Joseph's Church by A. H. Albertson, J. W. Wilson & Paul Richardson, associates, and the Washington Athletic Club, Seattle, Sherwood D. Ford, architect.

The following month (March 1931) the Los Angeles Stock Exchange by Samuel E. Lunden, John and Donald Parkinson, was featured.

An exhibition staged by Portland, Oregon, architects, was described in July 1931 together with photos of some of the work displayed. Among the architects represented were Harold D. Marsh, Morris H. Whitehouse, Jamieson Parker, Sutton & Whitney, Francis B. Jacobberger, Lawrence, Holford, Allyn & Bean, Knighton & Howell, Geo. H. Jones, Harry A. Herzog and Harold F. Doty.

(See page 39)

LET'S FACE
GAS VENTING

By ALAN KINKEAD, President
William Wallace Company*

PART II

Fortunately for us there is nothing about our present problem that modern research and an open mind on the part of the industry can't cure. To be sure there will be work and lots of it! Changing codes is not an over-night job, but it is a rewarding one when everyone concerned benefits.

Mr. Walter Kirk has just finished reviewing the progress made in our knowledge of gas venting in recent years. He has shown that we have a vast wealth of knowledge on the subject. I agree with him but I take exception to his remark that "it is expected that these necessarily complex mathematical relationships will eventually be reduced to simple tables or charts for every-day use." There is nothing to stop us from producing these tables or charts today—not "eventually."

To produce reasonably accurate gas vent design tables all we have to do is use the knowledge we already have. This is not a difficult task. Mr. R. L. Stone, Chief Research Engineer, Metalbestos Division of the William Wallace Company, has recently completed such tables for Metalbestos Gas Vent Pipe. It is a simple matter to do it for other types of vent pipes.

These charts are easy to use. Fig. 6 shows excerpts from the design tables for single vents.

Let's assume we have a 120,000 Btu furnace to be vented. We must first determine the size of the draft hood collar—6" for this example. Next we must determine the approximate height from the draft hood to the point above the roof where the vent is to terminate. Let's say this is 10'0". The table shows us that if the vent runs straight up from the draft hood we can use 5" diameter pipe instead of 6"—the

NOTE: This is the second and concluding part of an article written for ARCHITECT & ENGINEER magazine by Alan Kinkead, President and General Manager of William Wallace Company, Belmont, California. The author holds a Master's degree in Metallurgical Engineering, Stanford University, and has been president of his firm since 1946.

(TENTATIVE VALUES)

METALBESTOS SINGLE VENT DESIGN TABLES (EXCERPT)

FOR VENTS CONSTRUCTED ENTIRELY OF METALBESTOS, FROM DRAFT HOOD—TO TOP

RATED APPLIANCE HEAT INPUT BTU PER HR.	SIZES		HEIGHT OF VENT, FEET, FROM DRAFT HOOD TO TOP											
	DRAFT HOOD	VENT	4	6	8	10	12	14	16	18	20	25	30	40
			MAXIMUM LENGTH OF LATERAL ALLOWED FOR EACH HEIGHT, FEET OF HORIZONTAL RUN											
30,000	3	3	V	6	8	10	12	13	12	11	10	5	V	X
	3	4	V	6	8	10	12	11	10	8	6	2	X	X
	4	3	X	X	X	5	6	6	5	3	2	X	X	X
	4	4	V	6	8	10	12	12	10	9	7	V	X	X
120,000	5	5	V	V	2	10	12	14	16	18	20	25	30	27
	6	5	X	X	X	V	12	14	16	18	20	25	20	15
	6	6	V	6	8	10	12	14	16	18	20	25	30	25
	7	6	X	X	X	10	12	14	16	18	20	25	23	15
	7	7	V	6	8	10	12	14	16	18	20	25	30	23
220,000	7	6	X	X	X	X	X	X	V	5	9	16	26	28
	7	7	V	V	8	10	12	14	16	18	20	25	30	40
	8	7	X	X	X	X	V	14	16	18	20	25	30	40
	8	8	V	6	8	10	12	14	16	18	20	25	30	40

Fig. 6

V—Vent must be vertical. No lateral can be used.
X—Unsatisfactory vent. May cause spillage, condensation or both.

size of the collar. If the furnace were so located that a lateral run is required the table shows that 6" pipe must be used and that the lateral should not exceed 10 ft. in length.

The second chart (Fig. 7) is for combined vents, 3" and 4".

Assume we have a 30,000 Btu hot water heater with a 3" vent collar and an 80,000 Btu central heating furnace with a 4" vent collar. We then use the table for 3" by 4" combination. Assume both draft hoods happen to be at the same height and that the height from the draft hood to the termination of the vent is to be 15' 0". For the water heater the table shows that for the following common vent sizes the rises in the connector should be:

Common Vent Diameter	Rise in Connector
4"	2½ ft.
5"	1½ ft.
6"	1 ft.

Similarly for the furnace

4"	4 ft.
5"	1 ft.
6"	1 ft.

Now if we have limited head room and can only get 1 ft. rise in the connectors we see that we must use a 6" diameter common vent. In this case the required area of the common vent is 44% greater than the sum of the areas of the two connectors. This is much greater, almost twice, than that called for by most codes.

Suppose now that we could have joined the vent connectors at a height of 4 ft. above the draft hood. We now see that a 4" diameter common vent could be used. The use of 4" in this case is prohibited by most codes.

It should be kept in mind that these charts are necessarily conservative. They are based on the assumption that the appliances have poor venting characteristics. In other words in the example just given where a 6" diameter vent was required a 5" vent might have worked—but also it might not have. The 6" is practically sure to work.

The tables were calculated on the basis of the equations we developed several years ago and which were published in the Transactions PCGA, 1952. Hundreds of test set-ups have since been tried and all have been found to operate in accord with these equations.

Typical of the close agreement between theory and practice is the following example of a combined vent system.

From theory it is apparent that the vertical rise in the connector is one of the most important factors. The vent system shown in this photograph (Fig. 8) was set up to check the theory. As can be seen, the height of the connectors could be changed without altering any other part of the system. The height of the vent connectors was varied from 0 ft. up thru 4 ft. The height of the common vent was adjusted each time to obtain the same flow of vent gases from the

(SAMPLE)

METALBESTOS

(TENTATIVE VALUES)

COMBINED VENT DESIGN TABLE (EXCERPT)

FOR COMBINATIONS OF 3 INCH AND 4 INCH CONNECTORS

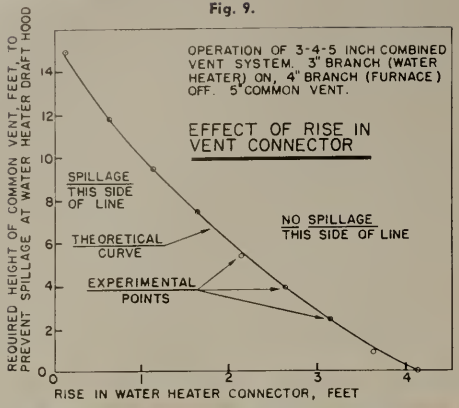
HEAT INPUT TO 3 INCH CONNECTOR, BTU PER HR.	COMMON VENT SIZE, INCHES	HEIGHT OF VENT, FEET, FROM DRAFT HOOD TO TOP										
		5	6	8	10	12	15	20	25	30	40	50
		RISE IN 3 INCH CONNECTOR, VERTICAL FEET, FROM HIGHEST EDGE OF DRAFT HOOD SKIRT—TO ENTRY AT COMMON VENT										
21,000	4	2½	2½	2	1½	1½	1	1	1	1	1	1
to	5	2½	2½	1½	1	1	1	1	1	1	1	1
25,000	6	2½	2	1	1	1	1	1	1	1	1	1
26,000	4	S	S	4	3½	3	2½	2	1½	1½	1	1
to	5	S	S	3½	2½	2	1½	1	1	1	1	1
30,000	6	S	S	3½	2½	1½	1	1	1	1	1	1

HEAT INPUT TO 4 INCH CONNECTOR, BTU PER HR.	COMMON VENT SIZE, INCHES	HEIGHT OF VENT, FEET, FROM DRAFT HOOD TO TOP										
		5	6	8	10	12	15	20	25	30	40	50
		RISE IN 4 INCH CONNECTOR, VERTICAL FEET, FROM HIGHEST EDGE OF DRAFT HOOD SKIRT—TO ENTRY AT COMMON VENT										
61,000	4	S	S	5	3½	2	1	1	1	1	1	1
to	5	S	S	3½	1½	1	1	1	1	1	1	1
70,000	6	S	S	3	1	1	1	1	1	1	1	1
71,000	4	S	S	S	6	5	4	3	2½	1½	1	1
to	5	S	S	S	4½	3	1	1	1	1	1	1
80,000	6	S	S	S	4	2	1	1	1	1	1	1

"S" means use single vent.

Fig. 7.

Fig. 9.



water heater draft hood. This chart (Fig. 9) shows the results. The curve represents the calculation values. The points are the experimental values found. This is certainly strong evidence that the theory and practice agree.

Use of charts such as these would improve gas venting and also in many cases reduce the cost of the vent installation.

The foregoing, I think, shows that we have ample knowledge of the operation of gas vents. This knowledge, supplemented by continued research by Metalbestos Division and industry groups assures proper gas utilization and the ultimate establishment of uniform venting practices throughout the nation.

(Conclusion)

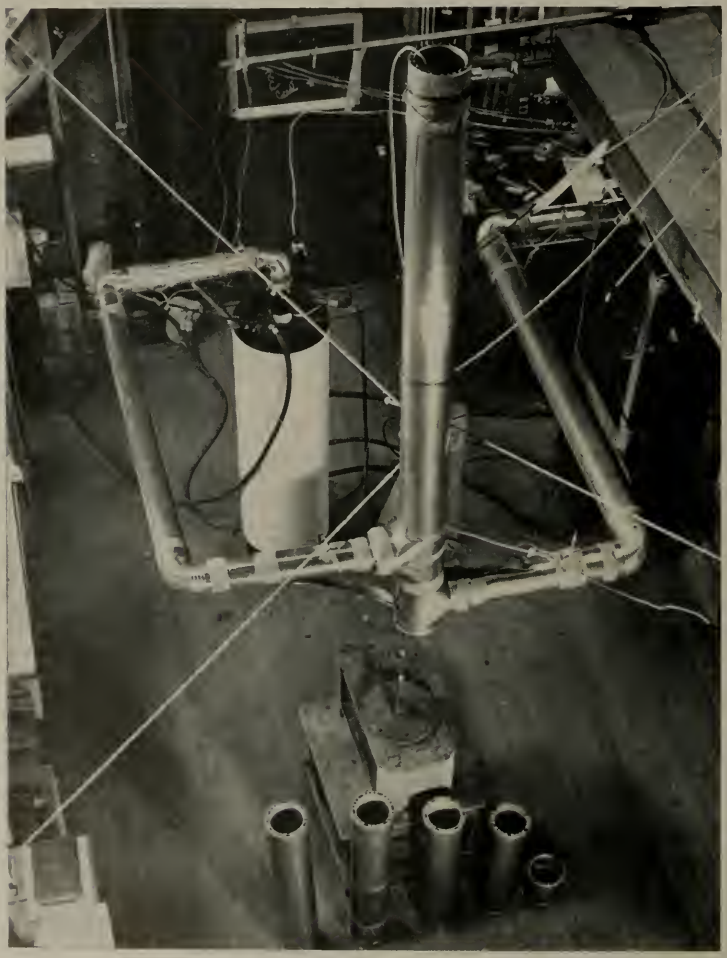


Fig. 8.

Laboratory vent in which rise in vent connectors may be adjusted without a change in connector length.

THIRTY YEARS OF PROGRESS

KRAFTILE COMPANY

A WESTERN BUILDING PRODUCTS MANUFACTURER WITH PROVEN RECORD

Kraftile Company, of Niles, California, is one of the oldest continuous advertisers in Architect & Engineer, having inserted its first advertisement in February, 1938. And like Architect and Engineer, the company this year observes an important anniversary—its 30th.

Starting in 1925 as an outgrowth of the K & L Box Lumber Co., at Niles, it operated as the Kraft Clay Products Company with production confined to hand-made, Spanish-type roof tiles fired in wood-burning, up-draft kilns.

In February of the following year, as plans for expansion were developed, the firm was incorporated as the Kraftile Company with C. W. Kraft, president, and during its 30 years of operation, has pioneered a number of developments which have had far-reaching effect on production and use of masonry products.

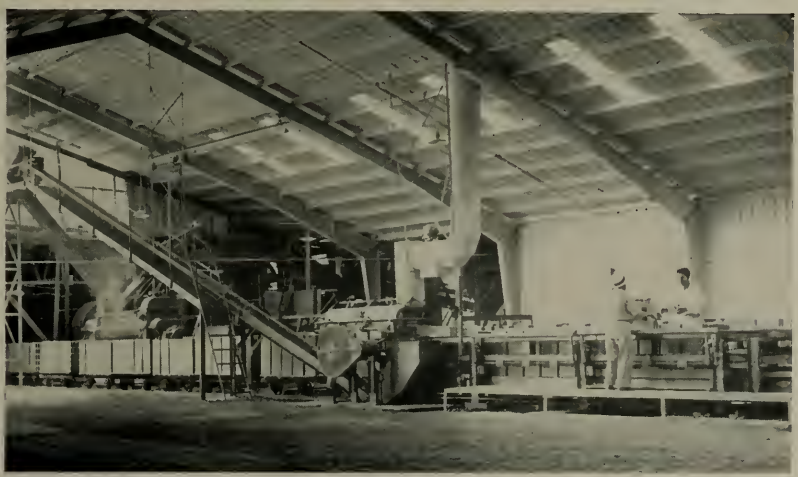
First was the company's switch from roof tile to glazed wall tile. This necessitated installation of down-draft, oil-fired kilns because of the need for better firing facilities and quality control. Oil-firing was replaced by natural gas within a few years.

Constantly pressing forward in the field of product improvement, Kraftile added a tunnel kiln in 1933 in the depths of the depression. Simultaneously, the company pioneered the production of glazed structural wall units in the West. These have become the company's major product, although patio tile, introduced in 1940, and Kraftile veneer, brought out in 1953, are

(See page 46)

"PUSHBUTTON" CONTROL of materials handling system and batching operations—Joe Mesquite, Kraftile's 30-year man, checking controls.

A major phase of Kraftile's long range modernization program, nearly complete, is the new production room shown below — new extrusion machine line features vacuum processing, automatic cutting, automatic spray booth, and new "off-bearing" station.



IN 1912 — A TWO-MAN SHOP

MICHEL AND PFEFFER IRON WORKS

A 300 EMPLOYEE INDUSTRY TODAY

In 1912 the Michel & Pfeffer Iron Works was a two-man plant, starting in a rented 25 x 60-foot shop and office building at 42 Otis Street, San Francisco, with a working capital of $185.

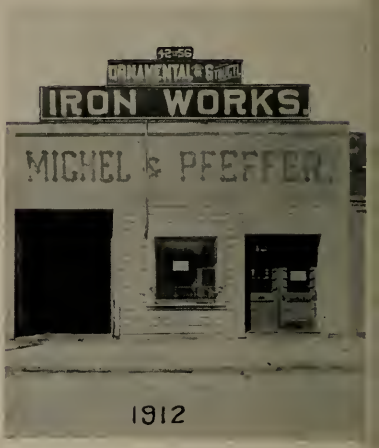
Today the firm retaining its original name, occupies eight acres of land in South San Francisco: three and one-half acres covered with modern factory buildings; provides employment for approximately 300 people, with an annual payroll in excess of $1,000,000.

Financially, the firm enjoys a Dun & Bradstreet AAA rating (over $1,000,000, and highest rate of credit).

From its Otis Strect location, the firm moved to Tenth and Harrison Streets in 1918, where it continued to operate until forced to move to the new plant in South San Francisco four years ago, when the State Highway Commission required two city blocks of their plant for new freeways.

Starting as an ornamental iron works, it was soon apparent there existed a ready market for expansion to other branches of the metal industry.

Products manufactured today by the firm include steel and aluminum windows and doors of various types and sizes for residences, office buildings, schools and hospitals. Anothr department furnishes light steel buildings, such as service stations, restaurants, lunch rooms, battery and tire shops.



The architectural department fabricates products in wrought iron, cast iron, aluminum, bronze, and stainless steel, including spiral stairs, railings, folding gates, fire escapes, sidewalk doors, bronze tablets, mausoleum fixtures and wire guards. All products carry the trade name "Ariston Metal Products" or "Arislide."

An idea of the work undertaken by the firm is gained from the fact that 5,000 jobs go through the plant every year, ranging from a few dollars to $100,000 and up.

Dealers and agents service offers complete representation in the important centers of the Pacific Coast, Arizona, New Mexico, Texas, Nevada, Utah, and some Eastern and Southern centers; in Hawaii, Philippine Islands, and some Central and South American countries.

AIR VIEW of 3½ acre plant. Note provision for customer parking.

ALAMEDA TREATING PLANT

Forest products stockpiled in yard on San Francisco Bay, for easy shipment by rail or water to any construction or manufacturing site.

"GREAT OAKS FROM SMALL ACORNS GROW!"

The J. H. BAXTER & COMPANY

One of the West's Largest Producers Of Pressure Treated Forest Products

Romance of the days when "iron men and wooden ships" plied the Pacific Coast in the lumber trade is part of the background of J. H. Baxter & Co.

When John H. Baxter founded the firm in the late 1800s, he probably never envisioned the growth and direction which this versatile firm has taken. Today, Baxter's pressure treated forest products, under the well-known trade name "BAXCO," are in use along Western highways, in schools, homes, bridges, mines, farms, railroads and wherever it is necessary to protect wood from its natural enemies—wood rot, termites and insects.

As the Pacific Coast has grown, so has J. H. Baxter & Co. Marking nearly 75 years in Western enterprise, the firm has just moved into new offices in the equally new Equitable Life Building, 120 Montgomery Street, San Francisco.

The new quarters are the home office, formerly located at 200 Bush Street, San Francisco. The firm has treating plants and storage yards in Alameda and Long Beach, California, and Eugene and The Dalles, Oregon, for prompt treatment and shipment of products anywhere in the world. Main sales offices are in Los Angeles and San Francisco; Portland and Eugene, Oregon; and Omaha, Nebraska.

The founder of J. H. Baxter & Co. was a lumber broker. He and 21 other men each had a 1/22nd interest in a fleet of 22 sailing vessels which carried poles, lumber and pilings from the forests of Northern California, Oregon, Washington and British Columbia to San Francisco and Los Angeles, the boom areas even in the late 1800s.

Later wharf-side yards were established in Long Beach and Alameda where the wood products were

OFFICIAL CONFERENCE—C. A. Chadbourne, President, seated, and standing (l. to r.): W. W. Jackson, General Sales Manager; R. K. McCulloch, Assistant General Sales Manager; and Alfred X. Baxter, Executive Vice President.

stockpiled. Eventually a need was felt for protecting poles placed in the ground because of frequent replacements through rot and insect attack. So, a butt treating plant was started to treat the poles to give them longer life once set in the ground.

From this small beginning grew the present wide-flung and diversified pressure treating plants and methods which have made J. H. Baxter & Co. one of the largest wood preserving organizations in the West.

Today, forest products are not merely painted, dipped or sprayed with the various wood preservatives; the protective preservatives are forced deep into the wood cells under heavy pressure, up to 150 pounds per square inch.

The pressure treating process takes place within large iron cylinders, or retorts, some over one hundred feet in length. The wood material is secured to tram cars, on rails, which are moved into the retort. After the retort door has been closed and hermetically sealed the lengthy treating process begins. First, steam is introduced to expand the wood cells and force them to release their moisture. In the second stage a vacuum is pulled to dry the wood surfaces and increase receptivity to the treatment. While still under vacuum the preservative solution is admitted into the retort. It is then forced into the wood under pressure of about 150 psi. This phase lasts for several hours. After pressure is released the charge remains in the retort at atmospheric pressure for an hour while excess solution drips off.

For each wood variety, for each use, and for each preservative there are minimum requirements as to penetration of treatment as well as the amount of preservative retained by the wood. These specification standards are set up by agencies of the government, by the American Wood Preservers Association, as well as by large commercial users.

J. H. Baxter & Co. employs highly skilled and experienced engineers to meet these standards and keep check on every step of the treating process, from first decisions to the final stamping of each piece with the Baxco trademark.

The firm pressure treats both round and sawn materials with creosote, creosote petroleum mixtures, pentachlorophenol, and with salt preservatives such as Chemonite, used when clean, odorless and paintable material is desired. The firm also offers treatment with protexol fire retardants.

The creosoted products are used extensively for railroad ties, marine piling and for timbers exposed to the weather.

Chemonite (ammoniacal copper-arsenite) is unique among salt preservatives in that it is carried into the wood by an ammoniacal solution and not by water. Therefore, the salts are highly resistant to leaching, resulting in an extremely long lived material under severe moisture conditions.

The popular CZC (chromated zinc chloride) is an inexpensive salt treatment popular for foundation lumber in home building. Penta (pentachlorophenol) is a stable, oil-based preservative which is gaining wider use among utilities and railroads.

Lumber treated with the Protexol fire retardants meets all important fire resistant specifications. These are most effective and widely approved fire retardants. Protexol-Pyresote affords termite and decay protection as well to the treated lumber.

Steamers and railroads have replaced the sailing ships of yore, but the driving spirit behind the Baxter firm remains the same. When John Baxter died in 1920, he left his sons, Horace X. and A. M. Baxter to head this enterprising firm. The former died a few years ago, and A. M. Baxter is active in the organization today. He will relinquish the presidency in January to C. A. Chadbourne, presently executive vice-president. Alfred X. Baxter, grandson of the founder, succeeds to Mr. Chadbourne's former post. Other officers are Gardner Pond, vice-president; R. B. Mossman, secretary; W. W. Jackson, general sales manager; and R. K. McCulloch, district manager, northern California. This core of Baxter executives directs the firm's nearly 500 employees throughout the West.

STILL STEAMING — This pressure treated lumber comes from a giant retort at the Baxter & Company processing plant.

(Continued from page 31)

In September, the same year, some exceptionally fine houses by M. Roy Kelley of Los Angeles were illustrated; also by Mr. Kelley, pictures of the First Church of Christ Scientist, Fillmore.

Progress work on the Golden Gate Bridge was described and illustrated in April 1934.

The chain store and supermarket began to manifest themselves in 1934, and the planning of this type of building was outlined in June of that year. It was about this time that building costs were soaring and economists were calling attention to the situation, a very outspoken critic being John M. Keynes, distinguished British economist, who was quoted as saying:

"The high level of building costs in the United States appears to be scandalous, both of materials and of labor. Costs must be more than 50% above and perhaps double what they are in England."

More Honor Awards were pictured in May 1935.

Architects' Reports

Announcement of Architect and Engineer's ownership of Architects' Building Reports was made in June 1936 and this service has been continued without interruption under the efficient management of Vernon S. Yallop.

The winning plans in the Oregon State Capitol competition were published in July 1936. Arthur Brown, Jr., had some excellent comments directed to the local contestants. Winners of the competition were Messrs. Trowbridge & Livingston and Francis Kelly.

The new Alameda County Court House, Will G. Corlett, architect, was illustrated in September 1936, with some excellent views, exterior and interior, plus a unique cover with the building outlined in white over a red background.

A new style of architecture, as practiced locally, was beginning to appear in 1936, emphasized in the October issue with a lengthy article by Robert H. Orr of Los Angeles, subject: "Times Change Architectural Style—Situation Termed 'Comedy of Functionalism'."

A night view of the San Francisco Bay Bridge was printed on the November 1936 cover.

In the December number, the same year, Douglas Dacre Stone was awarded the feature story for his drawings of the Persian Room in the Hotel Sir Francis Drake consisting of ten colorful murals by Artist

(See page 46)

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A.I.A. REGIONAL DIRECTOR AND JUDICIARY COMMITTEE

Provision for a Regional Judiciary Committee to represent the Pacific-Northwest and appointment of members was announced following the recent Glacier (Montana) Park Conference.

Appointed to serve on the Judiciary Committee were: Irving G. Smith of Portland, Theodore Prichard of Moscow, W. W. Durham of Tacoma and Lawrence Waldron of Seattle.

Donald J. Stewart of Portland was elected to succeed Waldo Christenson as Regional Director and direct representative of The American Institute of Architects.

PASADENA CHAPTER

Donald Beach Kirby, Regional Director of the California-Nevada-Hawaii Regional Council, and architect of San Francisco, was the principal speaker at the November meeting held at Eaton's. He discussed recent association activities and the National A.I.A. Convention to be held in Los Angeles in 1956.

SOUTHWEST WASHINGTON CHAPTER

"Public Relations," was the subject of a panel discussion at the October meeting held in the Olympian Hotel, Olympia.

Speakers included: Walter J. DeLong, Director of Public Relations for Weyerhaeuser Lumber Company,

Northern California Chapter:
Wayne Hertzka, President; Wm. Stephen Allen, Vice-President; Rex Whitaker Allen, Secretary; C. Morrison Stephens, Treasurer; and Directors: Wm. Corlett, Robert Kitchen and Bernard Saharoff. Executive Secy., May B. Hipshman. Chapter Offices, 26 O'Farrell St., San Francisco.

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Producers' Council — Northern California Chapter (See Special Page)

Virgil Landon, Retail Advertising Manager, Tacoma News-Tribune; Donald Watt, Producer-Director, KTNT-TV; Richard Lawrence, Associate Editor, Daily Olympian; and Robert W. Evans, Architect and Public Relations Chairman, moderator.

COAST VALLEYS CHAPTER

A joint meeting with the American Society of Civil Engineers was held recently at Rickey's Studio Inn, Palo Alto.

AMERICAN INSTITUTE OF ARCHITECTS CONVENTION

Charles O. Matcham, A.I.A. Architect of Los Angeles, and Chairman of the Host Chapter 1956 National A.I.A. Convention in Los Angeles in May, recently announced chairmen of committees for the conclave.

Douglas Howard was named chairman of the Guide Book Committee; Bill Shinderman, Publications and Programs; C. M. Deasy, Tours; Herbert Powell, Budget and Finance; Sam Lunden, Reception and Hospitality; George V. Russell, Exhibits; Floyd Rible, Public Relations; John Rex, Theatre and Cultural Night; Charles Luckman, Western Gala; Henry Wright, Reservations and Tickets; Francis Merchant, Symbol Competition; Jack London, Allied Professions; Robert Field, Transportation; Paul Hunter, Decorations; and Mrs. Ruth Gould, Ladies' Events.

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STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"Earthquake Symposium—Development in Structural Design and in Geology," was the subject of the November meeting held in the Engineers' Club, San Francisco.

Speakers included Gordon Oakeshott, Supervising Mining Geologist, California Division of Mines; John E. Rinne, Civil and Structural Engineer, Standard Oil Company of California; Henry J. Degenkolb, Structural Engineer, office of John J. Gould; and Donald F. Moran, Structural Engineer, Pacific Fire Rating Bureau, Los Angeles.

New members include: Stanley F. Gizienski, James C. Roberts, John V. Schwafel, AFFILIATES; Harry P. Weldon, and Henry Wright, JUNIOR members.

FEMINEERS

The Annual Holiday Dinner Dance of the San Francisco FEMINEERS was held at the Huntington Hotel, San Francisco, early this month, with a record attendance.

Regular luncheon meeting at the Elks Club, November 16, was devoted to the subject of "Our Thanksgiving" with Mrs. Walter J. Hanna the speaker.

AMERICAN SOCIETY OF CIVIL ENGINEERS—Los Angeles

"Unions, Unity, or Utopia" was the subject of a recent meeting of the Desert Area Branch held at the China Lake Community Center. Speakers included: Hugh Mulholland, Harold Halldin, William Keener, and Hodge Gains. Hal Harney served as Program Chairman of the meeting and Maurice Lipp, president, presided.

The Los Angeles Section will confer Life Memberships on the following at the January meeting:

Lloyd Aldrich, Arthur A. Beard, Clinton L. A. Bockemohle, James Elliott Byers, William Edward Hall, Forrest Shepherd Harvey, Raymond Matthew, Frederick Thurlough Morse, Jacob Overwin Oltmans, Sydney Lionel Rothery, Frank Adam Schilling, Francis Benjamin Stewart, Kenneth Quinton Volk, and James Everett Jones.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

"The Structural Engineers' Inspection Responsibilities," was the subject of a panel discussion at the November meeting, held in the Rodger Young Auditorium, Los Angeles.

Included among the speakers were: Ernst Maag,

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

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principal structural engineer, California State Division of Architecture; Milton W. Nigg, district structural engineer, California State Division of Architecture; Joseph Sheffet, Consulting Structural Engineer; and Robert M. Wilder, Consulting Structural Engineer.

On the job construction and in place erection of structural assemblies were discussed in detail.

New Members: Truland H. Carter, Alexander B. Daytz, and Edward Lindskog, MEMBERS; Jacob W. Gamer, JUNIOR; Arthur Stevens, AFFILIATE; and Milton R. Neuman, Fred A. Sandermann, and Francis C. Spurrier, ASSOCIATE.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco

Prof. Jack R. Benjamin and Prof. Igor Popov spoke on "Limit Design" at a recent meeting of the Structural Division, held in San Francisco.

"The Facts on Unionism and Engineers," was discussed by Arthur Mendelson at the Junior Forum meeting held, November 15th in Oakland.

Herbert G. Crowle spoke on construction projects of the Alameda County Flood Control District at the recent meeting of the Construction Division.

AMERICAN SOCIETY FOR METALS PUGET SOUND CHAPTER

William Smith of General Electric's Hanford Works and Chairman of The Columbia Basin Chapter (ASM) delivered a recent lecture on the subject "Materials for Atomic Energy Plants."

Mettallurgical problems associated with operations of an atomic energy plant are very similar to those of any other industrial plant. The main consideration of materials used in reactor operations is corrosion. Consideration is also given to the affects of atomic fission upon metallic materials but there are still many "educated guesses" used in fabrication of reactor sections. The most important consideration is its ability to do the job for a continuous operation. Cost is secondary.

Materials generally used in reactor construction are cast steel aluminum, austenitic stainless steel, concrete and graphite. Type 304-L and 347 are the most used stainless steels. Most materials are procured through ASTM standards. The testing of materials requires special and elaborate consideration and in many instances can be conclusively evaluated only on finished equipment in pilot plants.

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KRAFTILE COMPANY

From page 37)

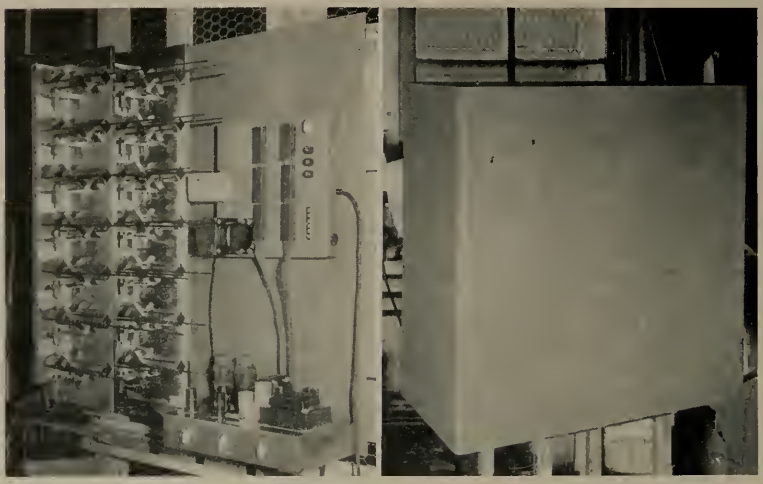
becoming more and more important in the company's over-all operations.

Next important forward step took place in 1951, when the company pioneered with the installation of a $124,000 pushbutton controlled materials handling system and batching operation designed to lower costs and improve uniformity of quality. This was the first phase of a long-range modernization and expansion program.

In 1954, the second phase of this program began, involving the replacement of clay preparation and forming operations. Again the company pioneered, as much of the new equipment was built from designs developed specifically for this job.

In summing up the net effect of the past 30 years of operation, Chas. W. Kraft, president, said: "Most important effect from the standpoint of the architect and his client, is our ability currently to produce and sell Glazed Structural Wall Units at a price 20% below the level of 20 years ago. Coincident to this development, and contributing to it, Kraftile sales have grown 7½ times during the last 20 years."

Kraft believes that both patio tile and the firm's new thin ceramic veneer are important contributions in the field of new product development. Patio tile sales have climbed steadily with the home building boom and with the increasing emphasis on outdoor living. Sales of thin ceramic veneer (it is ⅜" thick, weighs only 4 pounds per square foot) are also increasing, Mr. Kraft said.



STROMBERG CARLSON'S 25 - BELL FLEMISH TUNED UNIT

True tones of Flemish tuned bells are produced for the first time from individual metal bars of an electronic carillon with exact fidelity by an instrument known as the "Flemish Master," which is manufactured by the Stromberg-Carlson Company, a division of General Dynamics Corporation.

Not only does this instrument produce true Flemish bell tones, but the carilloneur can change the tones to those characteristic of English-type electronic bells, or to chimes, simply by turning a knob on the carillon console.

The "Flemish Master" combines several new developments in carillon design and construction to achieve this unique and distinctive result. Principal among these is the use of tone bars that are rectangular in cross-section, rather than round, to produce the bell sound. By striking these tone bars on their corners they are made to vibrate in both directions at once, thus creating two groups of musical components. These two groups of tones, combined, are exactly the same as those produced by Flemish tuned bells.

Another feature of the electronic carillon is the use of two magnetic pick-ups, or transducers, for each tone bar. These pick-ups are placed with extreme precision in assembling the carillon mechanism, to make sure they are exactly adjacent to those portions of the vibrating bar that produce the purest sounds.

The instrument has 25-tone bars, giving it a range of two full octaves, and can be played from a keyboard or automatic clock and player mechanism. It can be placed in any location, and can be either floor, or wall mounted.

ARCHITECTURAL FIRM EXPANDS

Victor Gruen & Associates, Los Angeles architectural firm, have added a telecommunications division to its services as planners, architect and engineers under the direction of Walter J. Duschinsky, D. Sc.

The new Division provides specialized services in the fields of communications, electronics and automation.

Duschinsky planned and designed the basic communications concepts of the United Nations headquarters building in New York, and has planned a number of TV-Stations throughout the country.

HALDEMAN APPOINTS NEW VICE PRESIDENT

R. E. Gray, Sales Manager of Dravo Corporation's heaters and cab conditioners, has been named vice president of Harry F. Haldeman, Inc., Los Angeles distributor for Dravo Corporation in Southern California, according to an announcement by Herbert P. Sheldon, executive vice-president of the firm.

Gray has been active in the heating and ventilating business for several years.

ARCHITECT SELECTED

The architectural firm of Barovetto & Thomas of Sacramento has been commissioned by the Sacramento Unified School District to draw plans and specifications for construction of the new Joaquin Miller, Jr. High School.

Estimated cost of the work is $450,000.

COLLEGE OF PACIFIC IN EXTENSION PROGRAM

The College of the Pacific at Stockton has announced it will enlarge the present facilities of the school to include a new Dining Hall, Women's Dormitory, a Museum Building and will construct an addition to the present Library Building.

Estimated cost of the work is $1,900,000. Architect has not been selected as yet.

APPOINTED DIRECTOR HOMES FOR KOREA

Carl G. Lans, architect and builder, has been appointed Technical Director of the building industry's "Homes for Korea"—a private enterprise "Point Four" program of technical assistance to South Korea—according to an announcement by General James A. Van Fleet, USA (Ret), honorary chairman of the committee.

Earl W. Smith, El Cerrito, president of the National Home Builders, and William Zeckendorf, New York City, president of Webb & Knapp, Inc., are co-chairmen of the committee which is under auspices of the American Korean Foundation.

The project envisages the building of up to 1,000 "pilot" homes in South Korea under the direction of architect Lans.

1960 OLYMPIC WINTER SPORTS

Architects Malone & Hooper of San Francisco have been selected by the California Olympic Organization Committee to draft plans for facilities to be used during the 1960 Olympic Winter Sports.

Facilities to be constructed near Tahoe City, California, will include a Stadium, Hockey and Figure and Speed Skating Rinks, and grandstands.

NEW COUNTY OFFICE BLDG.

Architect J. Clarence Felciano of Santa Rosa, is completing drawings for construction of a new County Office building to be built in the City of Santa Rosa for the County of Sonoma.

The building will contain 42,000 sq. ft. of floor area; will be a 1-story reinforced concrete construction.

NEW YOSEMITE LODGE BLDG'S

Architects Ambrose & Spencer of San Francisco have completed plans and work started on construction of three new buildings in Yosemite National Park, California.

The work includes a new cafeteria, grill and fountain, and cocktail room; a Post Office building to include a studio, general purpose room; a public lounge, and administration building. Buildings will be 1-story structural steel and frame, wood and glass walls, wood roof, concrete slab floors, and will be connected by glass wall walk-ways.

EDMONSTON RETIRES FROM STATE POSITION

A. D. Edmonston, California State Engineer, Chief of the Division of Water Resources, retired early this month following thirty-one years service with the State of California.

He began his employment as an engineer in connection with design and construction of hydraulic structures on various irrigation, hydroelectric and municipal water projects in California. Becoming Assistant State Engineer in 1945, Edmonston was appointed State Engineer in 1950, succeeding the late Edward Hyatt.

Over the years, architects, engineers, school authorities and contractors have come to agree that when sources of public drinking water must meet particularly rigid standards of sanitation, mechanical excellence and design, the ideal specification is HAWS! That's why the name "HAWS" is so often found on drinking fountains used in public schools—where equipment must be *extremely* rugged, *thoroughly* dependable, *completely* sanitary. *Always specify* HAWS!

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(From page 39)

A. B. Heinsbergen. A year later architects began to vie with one another designing the "plushiest" cocktail lounges, as for example, the Top-of-the-Mark and the Sky-room atop the Hotel Empire.

Most of the May 1938 issue contained school work by Messrs. Allison and Allison of Los Angeles. Many of California's finest school buildings have been designed by the Allison brothers.

An exhibition of architecture at the San Francisco Museum of Art was described in October 1938. The pictures included a very striking detail of a spiral stairway by Gardner Dailey. Two months later Ernest Born wrote a detailed description of the exhibition.

Progress in school design as evidenced by the work of March, Smith & Powell, Los Angeles, was pictured in November 1938 and the following month the magazine's pages were filled with carefully selected photos and drawings of recent work by Architects Spencer, Blanchard & Maher. An exquisite dining room window detail in the Ahwahnee Hotel, Yosemite National Park, executed by Jeanette Dyer Spencer, was a frontispiece gem.

Another cover change was introduced to the readers of the January 1940 magazine, which featured the work of Architect Mario Corbett, followed in the two succeeding numbers by portfolios of work in the offices of Henry Carlton Newton and J. Earl Trudeau, Paul R. Williams and John Ekin Dinwiddie.

In the January 1940 number E. N. Kierulff was listed as assistant editor, Mark Daniels, associate editor, and L. B. Penhorwood, business manager.

The Modern Trend

The trend in modern design continued upward following five or more years of moderate to radical attempts at modernism, functionalism and the "international style."

"Do you really think modern design is here to stay?" asked Kenneth G. Black, prominent Eastern architect, in a lecture before the Michigan Society of Architects.

"I certainly do," Black replied to his own query. Continuing, he declared: "Modern design is here to stay. It has taken on a cloak of such eminent respectability that it has been able to supplant traditional architecture in this country at its very strongest point."

A Redwood Number in March 1940 proved a popular choice and resulted in many requests for extra copies. The book contained articles on the use of redwood for structural and decorative work and its adaptability to Western style architecture.

Plans for the Treasure Island Fair were outlined in the May 1940 issue, the fair to run for four months

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with an estimated attendance of 7 million people. An architectural exhibition in the Fine Arts building was described.

Clarence W. W. Mayhew's work was shown in July 1940.

More innovations in chain store design were noted this same year. Some of the new structures were planned with sky-piercing towers, expanded window space, extra floor room for refrigerated merchandise, cabinet space for frozen foods, ice cream, etc. Two supermarkets in Southern California from the office of Stiles Clements served to illustrate the text prepared by Ben H. O'Connor.

Bank of America's skyscraper at Montgomery and California Streets, San Francisco, was illustrated in March 1942. Planned by L. J. Hendy and H. A. Schery the structure was acclaimed the last word in bank and office building design. Photos by the Moulin Studios were reproduced with full page cuts printed on sepia paper. An interesting feature of the issue was a line drawing of a map showing the locations of 495 Bank of America branches in 307 communities.

Defense Housing

With World War II came an influx of defense housing, with a preponderance of prefabricated houses. Some of the better examples of this type originated in the office of William W. Wurster, who deservedly received national recognition for his Vallejo projects.

Mr. Wurster's office building for the Shuckle Canning Co. at Sunnyvale was described and pictured in August 1943. Because of its many unusual features the structure received wide publicity. One unique feature —wide wood awnings, painted a coral color, built to protect working space from sun glare.

The October 1944 issue was a somewhat sad one for the writer in that it marked his retirement as editor, a position he had held since 1905. While retirement was really intended, two or three weeks of "nothing special to do" proved the fallacy of such a step (particularly when one's health is sound) and so the writer has continued to follow his chosen profession, not as editor, but as a free lance writer, working when and where the spirit moves.

Mark Daniels, who had discontinued the practice of architecture, stepped in as editor, later to be succeeded by Edwin H. Wilder, newspaper publisher and public relations counsel well versed in editorial duties and publication management. Other changes: K. P. Kierulff, president; Louise B. Penhorwood, vice president and manager, and E. N. Kierulff, treasurer. Miss Penhorwood, an indefatigable worker in the business office for many years, today enjoys senior authority in the management of all departments of the magazine.

The "Minnatoma Project" was described in the

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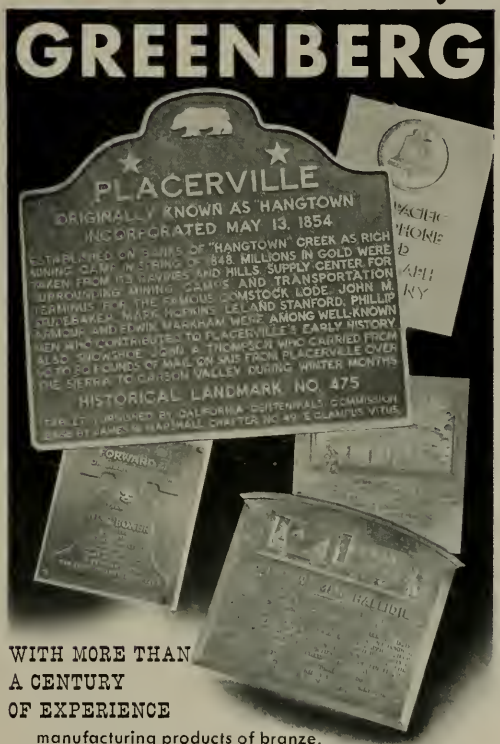

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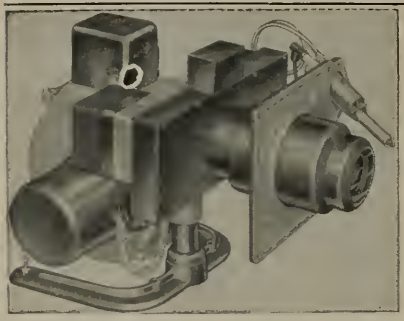
50th ANNIVERSARY . . .

August 1945 issue. The plan proposed to acquire all the property between Minna and Natoma Streets, San Francisco, and to combine them into a thoroughfare 230 feet wide, extending from the Telephone Building to South Van Ness Avenue—a $10 million project which Engineer George S. Hill predicted would be the solution to downtown traffic and parking problems.

"The New Look"

In August 1950 the "Architectural New Look" provoked some sharp criticism by Alfred Kuhn, who declared: "Architecture, as exemplified in our many fine civic structures, comparatively speaking, is taking a nose dive; indulging in a somersault, but backwards; reverting to primitive form, bleak barren walls, with an Americanized version of the new modern expression that often leaves one cold . . . structures reduced to factory type exteriors can only resemble factories and not commercial and apartment building, hospitals or schools."

Rereading some of the early bound copies of the magazine we discovered several important omissions. In 1915 the Los Angeles Biltmore Hotel was completed, and about the same time Messrs. Bakewell and Brown announced the dedication of the new Santa Fe depot in San Diego. Two years previously many fine



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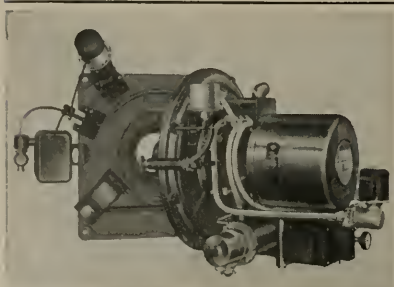

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schools and churches from the office of Norman F. Marsh, Los Angeles, were shown.

In 1931, the San Francisco Stock Exchange was given a generous spread, following which some of the magazine's readers challenged the propriety of Diego Rivera's Allegory frescoes.

More recent issues of the magazine featured remodelled house interiors by Klaus Pfeffer, whose fresh, modern treatment of outmoded interiors has brought the young designer wide praise. Late issues have also contained portfolios of construction projects completed by some of the better-known general contractors, including the Dinwiddie Construction Co., MacDonald, Young & Nelson, K. E. Parker, Barrett & Hilp, John J. Moore Co., and others.

Over the years the magazine's business and editorial quarters have been moved four times. After being burned out at 215 Sansome Street, the publication office was moved to the Monadnock Building, then to the Foxcroft, the Russ, and finally back to the Foxcroft at 68 Post Street.

In conclusion, it seems fitting to extend a few words of thanks and appreciation to those who have generously contributed from time to time valuable reading material, photographs and drawings, and to our advertisers, whose continued support has helped to make possible this Golden Anniversary.

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Among the first companies to use the advertising pages of Architect and Engineer was S. T. Johnson Co., manufacturer of oil burners and oil heating equipment. In 1909, just six years after they started in business in Oakland, this company bought advertising space in the May issue of Architect & Engineer. Today, the oil burners built by S. T. Johnson Co. are supplying heat and power for great buildings and great industries all over the world.

Seward T. Johnson was the founder of the company that bears his name. In 1920 he was succeeded by his brother, Jesse C. Johnson, who with Leo Jacobs, Vice President and Treasurer, built the company during the next quarter century into a dominant position in the oil burner industry. Dan Johnson, elected President upon the death of his father, J. C. Johnson, in 1952, is ably carrying on the engineering and production traditions which have made Johnson Burners an internationally known symbol of advanced design and precision workmanship.

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One of the few building material industries that have passed the half century mark with a going concern in the San Francisco bay area. Some 70 years ago (when the State of California was young and the West Coast virtually undeveloped) Vermont opened a San Francisco office. Several business moves have been made locally by the company over the years, most recent being its new plant at 2200 Third Street.

Some of California's finest commercial structures have been beautified with Vermont marble, including the I. Magnin buildings in San Francisco and Los Angeles, and the 25 story Equitable Life building, San Francisco.

Vermont Marble has been a consistent advertiser in Architect & Engineer since 1907, the space ranging from 1/12 to full pages.

The company's house organ, "Marble Chips" for September, features a historical review of the company's progress for the past 75 years by Mortimer R. Proctor, president, who cites the firm's fine record for nearly a century. The closing paragraph of Proctor's message is significant: "Size alone is not our goal—rather service and usefulness to our industry and to the country. Our relations with all must be based on justice and fair play."

* * *

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STOLTE INC. celebrating its 25th year, has played an important part in the West Coast construction field. Under the direction and excellent leadership of George C. Loorz, the company has enjoyed remarkable growth since its establishment by F. C. Stolte in 1915 and incorporation in 1930. In the last quarter of a century Stolte, Inc. has successfully undertaken and completed work in excess of $100,000,000.

Some of its major projects include the Cambria Reservoir, San Jose; Pumping and Appurtenances to Delta Mendota Canal, Tracy; California Bulk Plant for Union Oil Company, Antioch; U. S. Army Hospital, Fairfield; Oakland Public Library Building; miles of underground utilities, and many industrial plants, factories, commercial and public buildings.

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SIMONDS MACHINERY CO.

SIMONDS MACHINERY CO., like Architect & Engineer, is celebrating its 50th anniversary, and for years, and today, is recognized as one of California's leading firms dealing in pumping machinery only. Besides the San Francisco office, at 816 Folsom Street since 1924, the firm maintains a Southern California plant at 455 East 44th Street, Los Angeles. Ray Simonds, President and San Francisco Manager, points with pride to the part that his company has taken in San Francisco's progress, having supplied through the years thousands of pumps to the building trade, for use in many prominent buildings and industries. The firm handles pumps manufactured by nationally known firms: American Marsh Pumps, Inc., The Deming Company, Milton Roy Pumps, Bump Pump Company, and others.

The company's first advertisement in the Architect & Engineer appeared in the September 1910 issue, since when the firm name has continually been kept before the magazine's readers.

* * *

WESIX ELECTRIC HEATER CO.

Conspicuous among those who led the way in home heating by electricity in the early 1920's is W. Wesley Hicks, today head of the Wesix Electric Heater Company, whose article visioning the future of "atmospheric ions" is published in this issue.

Working first out of a four man shop on Market Street, confronted by a rate of 4½ cents a kilowatt, and more seriously by the incredulity of bankers, utility operators, and professors of engineering, he simply refused to quit. Those years saw development of a scientilfically designed ceramic core, location of a thermostat within the incoming air stream, a practicable balance between radiant and convection heat.

Significantly, as early as 1928, a patent was issued on the fundamental idea of an electric baseboard. The idea, incidentally,

(See page 59)

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HORNER'S DICTIONARY OF MECHANICAL ENGINEERING TERMS. 7th Edition. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $6.50.

A dictionary of terms used in the theory and practice of mechanical engineering in its seventh edition which has been revised and enlarged by Staton Abbey, author of numerous technical books in the diesel and automotive industry. The book was originally compiled by J. G. Horner, A.M.I., M.E.

The dictionary is separated into two major parts. Part I deals with modern terms, and Part II deals with General and Traditional terms.

This new publication is of particular value to students and to anyone in contact with mechanical engineering practice.

AMERICAN SOCIETY OF APPRAISERS—Appraisal and Valuation Manual. American Society of Appraisers, 100 W. 42nd St., New York 38. Price $15.00.

This new volume provides the know-how and cumulative experiences of America's outstanding experts in the field of appraisal and valuation, and contains the results of over two years, nation-wide study.

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DETAILS OF MILLWORK. Woodwork Institute of California, 681 Market St., San Francisco. Price $3.00.

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PROFESSIONAL DEVELOPMENT—The Responsibility of Industry and the Engineer. National Society of Professional Engineers, 1121 15th St, N.W., Washington 5, D.C. Price $4.00.

A complete transcript of the recent conference in Philadelphia on professional development sponsored by the National Society of Professional Engineers; featuring talks and panel discussions during the 21st annual meeting of the society. Contains 56 pages.

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tion and Maintenance", with sections devoted to discussions of corrosion and corrosion control, types of rink construction, comparative service record data, case history digests of rink installations in varied sections of the country, recommended maintenance procedures, brine tables and a listing of helpful technical bulletins; of particular interest to architects, engineers, arena superintendents, rink owners and municipal officials; contains more than 40 illustrations. Copies available write DEPT·A&E, Engineering Service Dept, A. M. Byers Co., Pittsburgh 22, Pa.

Aluminum products. New brochure fully describes commercial aluminum alloys; general properties, fabricating characteristics, typical applications, and available size ranges of each alloy; also included is alloy designation, weight comparison, and temper designation charts; indexed for ready reference, well illustrated. Free copy write DEPT·A&E, Peter A. Frasse & Co., Inc., 17 Grand St., New York 13.

Handling air and other gases. Four-page, two-color brochure gives engineering details and technical specifications of a compactly designed product for handling air or any other gas under pressure or vacuum; this positive-displacement blower takes in and discharges air from the pockets that form between intermeshing male and female rotors during the cycle of rotation; no friction wear nor need for internal lubrication; cutaway photo shows interlocking main and gate rotor assemblies; cross-section diagram shows component parts; performance chart and four tables to aid selection of proper size blower. Copy available Write DEPT·A&E, Read-Standard Corpn, 370 Lexington Ave., New York 17.

Fire-resistant ribbed steel sections. New 4-page technical bulletin on American Steel Deck—lightweight, fire-resistant ribbed steel sections adaptable for roofs, sidewall, sub-flooring, partitions. Complete description on material and many types available; safe load tables, erection details and welding specifications. Copy available write DEPT·A&E, American Steel Band Co., P.O. Box 565, Pittsburgh 30, Pa.

Lightweight concrete sectional slab. Revised 8-page catalog with application photographs and pertinent data on Rapidex —lightweight concrete sectional slab system for floors and roofs; details of use and advantages. Illustrations show manufacturing process, assembly and installation. Tables on load design, noise reduction, heat transmission. Available to architects, contractors, builders, write DEPT·A&E, Rapidex Corpn, 1100 E. 52nd St., Indianapolis 5, Ind.

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Gas cutting machine. New 12-page catalog describes 6B Oxygraph Gas Cutting Machine—multiple torch and accessories. Photographs of machine in action; dimensions and operating limits of motorized torch holders. Free copy, write DEPT·A&E, Air Reduction Pacific Co., 220 Bush St., San Francisco.

Booster pumps. Catalog describes 1 pump—five ways to use it. For hot water heating, for submersion, for surface, etc.; can be used to maintain 20-40 lbs. pressure for sprinkling or other uses, without benefit of tank or controls when submersed; portable and versatile. Free copy of booklet, write DEPT·A&E, Piqua Machine & Mfg. Co., Piqua, Ohio.

Instant automatic floodlighting. New 4-page, 2-color catalog on instant automatic floodlighting for use whenever regular circuits fail; gives complete descriptions, suggested uses, and installation recommendations; shows models and best uses. Copy available write DEPT·A&E, U-C Lite Mfg. Co., 1050 W. Hubbard St., Chicago 22, Ill.

Hollow partitions with channel studs. Descriptive booklet regarding uses and complete specifications; shows details of construction, allowable partition heights for various partition thicknesses and fire resistive ratings. Free copy write DEPT·A&E, Metal Lath Mfgr's Ass'n, Engineers Building, Cleveland 11, Ohio.

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Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

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2 x 6 x 12 Furring	$1.75 per sq. ft.
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For colored glaze add	.30 per sq. ft.

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Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

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Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per 5ack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .21
6x8x16-inches, each	.24	.26
8x8x16-inches, each	.28	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	---	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd	$7.75
⅜-inch to ⅛-inch, per cu. yd	7.75
No. 6 to 0-inch, per cu. yd	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	5/16x2
	$	$	$	$
Clear Otd., White	425	405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390.00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grade	375.00
33/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
33/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
33/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
33/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
33/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3¾") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard $ .75
Three-coat work	per yard 1.00
Cold water painting	per yard 25c
Whitewashing	per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16"..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—	
8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile— F.O.B. Plant	
12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or rapresentative, may be found.

ADHESIVES (1)

Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)

Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)

CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)

Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 1B6. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)

CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)

Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)

GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)

Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)

GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)

ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.

PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)

THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5974
New Britain, Conn.

CABINETS & FIXTURES (9b)

FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)

IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)

Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)

MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)

Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)

Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)

W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)

PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		C3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%Prom	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cp	12½cv	1½cA	10cp; IcA	12½cv	10cp; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cp	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cp; IcA	12½cv	10cp; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½% ¼%Prom				

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table 1.

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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OLD TIMERS . . .

(Continued from page 50)

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* * *

FINK & SCHINDLER CO.

Construction of two new establishments on Union Square, and alteration work on two neighboring retail stores have just been completed by Fink & Schindler Co., San Francisco, pioneer interior woodworking finishers.

Continuing the tradition as specialists of excellent craftsmanship of interior woodwork, the firm handled all interior cabinet work, fixtures and some furnishings for Blum's Restaurant, Shreve & Co., Jewelers; Milton J. Kreis drug store, and Joseph Magnin's 4th floor.

Typical of workmanship of this 73 year old firm, is the interior woodwork of the new Joseph Magnin store at the Stanford Shopping Center, completed October 1st. Among other recent installations are the Virus Laboratory and Cowell Hospital, both of the University of California; the Parkside Library and the International Room at the San Francisco International Airport.

* * *

ARCHITECTURAL DIVISION
Porcelain Enamel Publicity Bureau

Architectural porcelain enamel, with its many beautiful colors and finishes and its great strength and endurance factors, has proven its worth in all fields of construction. From its beginning as an excellent covering material for modernization programs, it has rapidly advanced in popularity to find universal acceptance in all types of construction.

The Architectural Division of the Porcelain Enamel Publicity Bureau was established in 1949 by a group of manufacturers of porcelain enamel in the West. The purpose of this organization: to publicize the use of porcelain enamel in the architectural and construction fields and to have readily available facts and information about the material as an aid to the architect and engineer.

The high qualities of porcelain enamel as a material ideally adaptable for modern architectural trends has been brought to the attention of the architects, engineers and builders through the comprehensive advertising and public relations program of the Poreclain Enamel Publicity Bureau. A partial list of some of the more recent structures where porcelain is used includes: Beverly Hilton, Beverly Hills; Newport Balboa Savings and Loan Association building, Balboa; U. S. Steel's Consolidated Western office building, Los Angeles; Union Oil Co. tower and garage, San Francisco; Contra Costa County Administration buildings, Richmond and Martinez, California; May Company, North Hollywood; General Telephone Company building, Santa Monica; Fremont Hotel, Las Vegas; Blue Cross building, under construction, Hollywood; and the Capitol Records building, under construction, Los Angeles.

* * *

TRICOSAL COMPANY

Tricosal may be classed as a cement admixture, it nevertheless is a product quite distinct in composition and results from other materials offered for this service. The mixture has been used successfully for the past quarter century in aiding the building industry to obtain the highest quality of workmanship in concrete design. A few of the many jobs where Tricosal has been used include the new San Francisco Airport Terminal; Hotel Statler, Los Angeles; Ginenni High school, San Francisco; Lever Bros. plant, Los Angeles and Standard Oil Building, San Francisco.

* * *

RHODES & JAMIESON, LTD.

RHODES & JAMIESON, Ltd. have been servicing the Bay area building industry with concrete materials for more than a quarter century. Their initial advertisement appeared in Architect & Engineer in July, 1926. The firm's ready-mix concrete has been used on many of Oakland's most prominent structures. Other items carried include rock, sand and gravel, and brick and plastering materials. The firm has recently become distributors for Servicised Products Corp. Their main office is at 333 23rd Avenue, Oakland, with branch yards in San Leandro and Centerville.

* * *

MOULIN STUDIOS

Established by Gabriel Moulin in 1884, it has been built into one of the largest commercial photographic businesses west of Chicago under the direction of his sons, Irving and Raymond. This growth record is attributed to unsurpassed quality. Many illustrations in this issue of Architect & Engineer are from Moulin prints.

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People who are shopping for a new home like to feel that every modern convenience has been built into the house they select. Exposed wires, for example, are a dead give-away that telephone outlets were put into the house rather than planned into it. Yet it costs so little to put built-in telephone facilities in your plans.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

HIGH SCHOOL ADD'N, Shafter, Kern county. Kern County High School District, Bakersfield, owner. Reinforced concrete construction, roof deck, structural steel and wood roof trusses, steel sash, automatic sprinklers, air conditioning; 20,346 sq. ft. floor space; facilities for auditorium, music room—$558,855. ARCHITECT: Wright, Metcalf & Parsons, Bakersfield. GENERAL CONTRACTOR: Ashby & Opperman, Bakersfield.

DEPARTMENT STORE, San Jose, Santa Clara county. Sears, Roebuck & Co., Los Angeles, owners. New department store building, 1 and partial 2-stories with basement, brick and frame construction, structural steel, air conditioning, asphalt tile floors, automatic sprinklers, tire sales and service shop—$2,500,000. ARCHITECT: Loubet & Glynn, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

LIBRARY, Benecia, Solano county. City of Benicia, Benicia, owner. Concrete block and frame construction library building—$26,734. ARCHITECT: Jack Buchter & Associates, Vallejo. GENERAL CONTRACTOR: Andrew F. Siri & Son, Benicia.

JR. HIGH SCHOOL ADDN, Franklin, Vallejo, Solano county. Vallejo Unified School District, Vallejo, owner. Small auditorium building addition to Franklin Jr. High School, frame and stucco construction, reinforced concrete, structural steel—$163,347. ARCHITECT: Charles N. Dougherty, Sacramento. GENERAL CONTRACTOR: Carl Recknagel, Vallejo.

WAREHOUSE, Los Angeles, J. William Beck, Los Angeles, owner. Brick warehouse, composition roof, wood trusses, concrete slab, sprinkler system, steel sash, electrical, fire doors; 6200 sq.ft. floor area. STRUCTURAL ENGINEER: Paul J. Toien, Los Angeles. GENERAL CONTRACTOR: Modern Industrial Constn Co, Los Angeles.

PAPER BOX FACTORY, San Leandro, Alameda county. Andre Paper Box Co, San Leandro, owner. Reinforced concrete tilt-up construction, wood roof trusses and wood roof; 50,000 sq.ft. of area—$150,000. ENGINEER: Simpson & Stratta, San Francisco. GENERAL CONTRACTOR: W. C. Tait, San Francisco.

APARTMENT BLDG, West Los Angeles, Los Angeles county. S. Jon Kreedman, Beverly Hills, owner. 2-Story, 14-unit, 48-room, frame and stucco, composition and gravel roof, carpet, asphalt tile and linoleum floors, plaster, gas wall furnaces, automatic washer and dryer, glass enclosed tubs, stall showers, electric heaters, ceramic tile, steel pipe columns, insulation, wrought iron railings, louvered and steel casement windows, garbage disposals, swimming pool, asphaltic paving, carport. ARCHITECT: Hyun & Cohn, Los Angeles. GENERAL CONTRACTORS: J. Kreedman & Co, Beverly Hills.

STORE & WAREHOUSE, Redding, Shasta county. Moty Bros, Klamath Falls, Oregon, owner. 2-Story reinforced concrete and concrete block and frame construction—$42,500. ARCHITECT: Clayton Kantz, Redding. GENERAL CONTRACTOR: Hancock Constn Co, Lafayette.

OFFICE BLDG., Tevrizian Bros., Los Angeles, owners. 2-Story frame and stucco office building, composition roof, asphalt tile and ceramic tile floors, terrazzo lobby, interior plaster work, toilets, steel beams, pipe columns, stone veneer, asphaltic concrete paving, vertical metal louvres, aluminum louvre and aluminum, fixed sash; 48x83 ft. ARCHITECT: Lundeberg & Strawn, Los Angeles. GENERAL CONTRACTOR: Tevrizian Bros., Los Angeles.

PAROCHIAL SCHOOL, Stockton, San Joaquin county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. St. Mary's High School, frame and stucco construction; consisting of administration, classrooms, science, home making, library, cafeteria, kitchen and toilet rooms — $1,127,250. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: Shepherd & Green, Stockton.

OFFICE BLDG., Burlingame, San Mateo county. Kingsway Corpn, San Mateo, owner 2-Story, reinforced concrete and concrete block and frame construction — $113,439. ARCHITECT: Miller & Steiner, San Mateo. GENERAL CONTRACTOR: Morris Daley & Harry Kime & Son, Burlingame.

MEDICAL BLDG, San Jose, Santa Clara county. Owner & Architect. 1-Story frame construction, wood exterior, 3,700 sq. ft. floor area — $63,935. ARCHITECT: Higgins & Root, San Jose. GENERAL CONTRACTOR: Frederick Winnigar, San Jose.

BANK BLDG, Bakersfield, Kern county. First Western Bank & Trust, San Francisco, owner. 1-Story and mezzanine; interior and exterior remodel, 2nd floor addition, concrete block, ceramic veneer, structural steel, steel windows, porcelain enamel veneer, terrazzo, acoustical tile; 3,000 sq. ft. floor area—$136,720. ARCHITECT: Robert N. Eddy, Bakersfield. GENERAL CONTRACTOR: Forrest Frasier, Bakersfield.

FACTORY BLDG, Pasadena, Los Angeles county. Enders Engineering Co, Pasadena, owner. 1-Story reinforced concrete factory building, composition roofing, steel sash, metal roll-up doors, concrete slab floors, office rooms with asphalt tile flooring, acoustical and plaster ceiling, plumbing, electrical, toilets, asphalt paving; 22,000 sq.ft. floor area. ENGINEER: Frank O. Bigelow, Pasadena. GENERAL CONTRACTOR: O. K. Earl, Jr., Pasadena.

LACQUER BLDG ADDN, San Francisco. National Lead Co, San Francisco, owner. 2-Story reinforced concrete construction; 2nd floor frame and steel construction; 21x50 ft. ENGINEER: John J. Gould, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

GENERAL STORE, Lakewood, Los Angeles county. Modern Women's Shop, Lakewood, owner. Construction will comprise a complete store area in building. ARCHITECT: Albert C. Martin & Associates, Architects & Engineers, Los Angeles. GENERAL CONTRACTOR: H. Kaplan Co, Los Angeles.

MEDICAL CENTER, U.C. Hospital, San Francisco. University of California Board of Regents, Berkeley, owner. 5-Story wing to comprise nurses residence; 2-story wing for lounge, offices, meeting rooms, and cafeteria; 3-story wing for book store, alumnae offices, interns residence; 2-story wing comprising swimming pool, gymnasium, handball courts, auto parking deck; structural steel frame, reinforced

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concrete construction; 175,000 sq.ft. of floor area—$2,917,900. STRUCTURAL ENGINEER: Huber & Knapik, MECHANICAL ENGINEER & ELECTRICAL ENGINEER: G. M. Simonson. GENERAL CONTRACTOR: James I. Barnes Constn Co, Redwood City.

QUARANTINE STATION, Alturas, Modoc county. State of California, Sacramento, owner. Plant quarantine inspection station comprising inspection sheds, offices, contraband room, toilet facilities; wood and frame, concrete foundation, concrete slab floors, wood siding, asphaltic paving in area, grading; 2400 sq.ft. floor area—$70,884. ARCHITECT: State Division of Architecture, Sacramento. GENERAL CONTRACTOR: Gibbon & Zick, Alturas.

WAREHOUSE, Los Angeles. Los Angeles Board of Education, Los Angeles, owner. 1-Story concrete block warehouse building—$64,900. ARCHITECT: Caldwell, Mason & Muntz, Architects & Engineers, South Gate. GENERAL CONTRACTOR: Chernus Bros, Los Angeles.

WINTER & SUMMER RESORT, Cold Springs, Tuolumne county. Cold Springs Chalet, Inc, Cold Springs, owner. 2-Story lodge and 2-story dormitory, frame construction; 100x40 ft.—$175,000. GENERAL CONTRACTOR: Craft Constn Co, Stockton.

PRIMARY SCHOOL ADDN, Beardsley, Bakersfield, Kern county. Beardsley Elementary School Dist, Bakersfield, owner. Brick and frame construction, composition shingle roof, concrete and asphalt tile floors; 15,804 sq.ft. floor area; comprising home making, arts, music, shop bldg—$246,531. ARHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: Ashby & Opperman, Bakersfield.

OFFICE BLDG, Napa. Napa Savings & Loan Ass'n, Napa, owner. 1-Story with mezzanine; concrete block and structural steel frame construction — $130,000. ARCHITECT: Cunneen Co., Los Angeles. GENERAL CONTRACTOR: A. A. Douglas, Napa.

CHURCH & EDUCATIONAL BLDG. Oakland, Alameda county. Lakeshore Ave. Baptist Church, Oakland, owner. Remodel present church into educational building and build new church; reinforced concrete construction, and frame and stucco—$500,000. ARCHITECT: Corlett & Anderson, Oakland. GENERAL CONTRACTORS: Mills Constn Co, San Francisco.

ELEMENTARY SCHOOL ADDN, North, Hillsborough, San Mateo county. Hillsborough Elementary School District, Hillsborough, owner. Frame and stucco construction; facilities for 6-classrooms, toilet rooms — $140,750. GENERAL CONTRACTOR: Morris Daley & Harry Kine, Burlingame.

AIRPORT BANK, International Airport, San Mateo county. Bank of America, San Francisco, owner. 1-Story with mezzanine, frame and stucco construction, concrete vault, concrete floor slab — $84,950. ARCHITECT: Arch. Dept. Continental Service, San Francisco. GENERAL CONTRACTOR: Johnson & Mape, Menlo Park.

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IN THE NEWS

METAL LATH ASSOCIATION APPOINTS COAST AGENT

A. C. Flegal has been assigned to serve as West Coast technical representative for the Metal Lath Manufacturers Association, according to an announcement by Donald R. Wadle, managing director of the organization.

Well versed in all phases of construction, Flegal has been serving as technical representative in the mid-west and southern area. Offices will be maintained in Los Angeles.

TRESIDDER MEMORIAL UNION BUILDING

Architect Eldridge T. Spencer of San Francisco has been selected to design the new Tresidder Memorial Union Building to be built on the Stanford University campus at Palo Alto.

The Memorial building will include meeting rooms, dining facilities and an auditorium. Estimated cost of the project is $1,000,000.

HILLSIDE OSTEOPATHIC HOSPITAL EXPANDS

Plans to expand Hillside Osteopathic Hospital, San Diego, into a 150-bed medical facility have been announced by the board of directors of the non-profit institution.

Included in the expansion program is major and minor surgery suites, surgery recovery rooms, radiology laboratories, emergency suite, business office and mechanical and electrical equipment to serve the eventual 150-bed hospital.

An expanditure of more than $2,000,000 is contemplated, according to Dr. Gordon Krauss, board chairman. Welton Becket, F.A.I.A. and Associates, Los Angeles, is the architect.

JUVENILE HALL FOR FRESNO

Architect Robert W. Stevens of Fresno is completing drawings for construction of a 1-story Juvenile Hall to be constructed in the city of Fresno for the county board of supervisors.

Included in the building will be a dormitory providing facilities for 50 beds, a kitchen, visiting room, and recreational area.

Estimated cost of the work is $350,000.

AMERICAN STANDARDS ASSOCIATION PREXY

James R. Cranwell, vice president of the Pennsylvania Railroad, New York, has been elected president of the American Standards Association to fill the vacancy caused by the death of Edward T. Gushee, vice president of the Detroit Edison Company.

SAUSALITO FIRM GETS DREDGE JOB

The Associated Dredging Company of Sausalito was recently awarded a $199,656 contract to dredge the Crescent City, California outer harbor basin, according to Colonel J. A. Graf, San Francisco District Engineer.

Approximately 187,000 cubic yards, including over-depth, are to be removed by use of a hydraulic dredge and crew of twenty men.

FLUOR CORPORATION WINS COOGAN AWARD

The Fluor Corporation of Los Angeles was awarded the annual Father Coogan Labor-Management Award for "outstanding contributions to industrial peace" at the ninth annual Catholic Labor Institute Labor Day Breakfast in Los Angeles.

Presentation of the award was made to J. R. Fluor, vice president of the company with labor, management, church and government leaders taking part in the event.

NEW LOW COST FINISH PLASTERING MACHINE

The first low-cost finish plastering machine containing a true plaster pump known as the AG-25 Plaster-Master, is a real full fledged plastering machine and will pump up to 50 ft. and give real production yardage.

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ARCHITECTURAL FIRM IN NEW OFFICES

The architectural firm of William Arild Johnson & Associates, Architects and Engineers, has moved into new offices and facilities at 3506 Broadway, Everett, Washington.

New offices were selected to better serve the firm's clients and the public.

SEATTLE COMPANY APPOINTED AGENT

Mortemp Division of Mechanical Products Mfg. Company of Seattle, has been

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appointed heating and air conditioning equipment distributor for Rheem Mfg. Co. in the state of Washington, according to a recent announcement by C. A. O'Donnell, Rheem Products Division sales promotion manager for the Pacific Northwest.

A stock of popular units and replacement parts will be maintained in Mortemp's Seattle warehouse.

McQUILKIN APPOINTED TO DFPA MERCHANDISING STAFF

Duane G. McQuilkin has been appointed a member of the merchandising department of the Douglas Fir Plywood Association, according to an announcement by W. E. Difford, managing director of the DFPA.

McQuilkin was formerly merchandising and advertising director of the Anderson Lumber Company of Ogden, Utah.

ARCHITECT SELECTED

Architect Raymond R. Franeschi of Sacramento has been commissioned by the Sacramento Unified School District to draft plans for construction of a 6-Multipurpose and kitchen buildings for various schools throughout the district, in conjunction with supervision of architect Harry J. Devine of Sacramento.

IDEAL CEMENT DIRECTORS

D. J. McGanney, vice president of the Southern Pacific Railroad Company, and a native Californian, has been elected to serve on the Board of Directors of the Ideal Cement Company, one of the nation's top cement manufacturing firms with headquarters in Denver, Colorado.

McGanney succeeds J. A. McCarthy, vice chairman and a director of Ideal Cement Company since 1952 when the Pacific Portland Cement Company of which he was president was merged with Ideal.

SUTTER HOSPITAL ADDITION

Architect Leonard F. Starks of Sacramento is completing drawings for construction of a 98-bed addition to the Sutter Hospital in Sacramento.

The addition will be 3-story, reinforced concrete construction and will contain 57,000 sq. ft. of floor area. Estimated cost is $1,500,000.

Consulting architects for the work are Stone, Mulloy & Marraccini, San Francisco.

MOTEL BUILDING

Stanley Mattson, draftsman of Mt. View, Santa Clara county, is drawing plans for construction of a 21-unit motel building to be built near Chico in Butte county.

The building will be of frame and stucco construction.

BROKERAGE OFFICE

Architect Albert F. Roller, San Francisco, is completing drawings for construction of an addition to the Sutro & Company stock brokerage offices in San Francisco.

The work comprises 2- and 3-story interior remodel.

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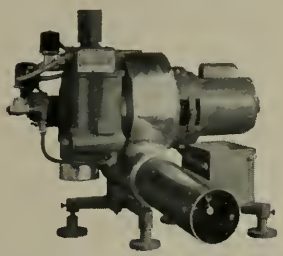

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Architect and Engineer, published monthly at San Francisco, Calif., for October 1, 1955.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, The Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

Editor, Edwin H. Wilder, 68 Post St., San Francisco, Calif.

Managing Editor, None.

Business Editor, L. B. Penhorwood, 68 Post St., San Francisco, Calif.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

L. B. Penhorwood, Business Mgr.

Sworn to and subscribed before me this 27th day of September, 1955.

(SEAL) IRENE CRESPI

Notary Public in and for the City and County of San Francisco, State of California.

(My commission expires Jan. 3, 1959.

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ARCHITECT AND ENGINEER

MODERN CHURCHES

VINCENT PALMER and HERBERT REX CARLYLE, Architects

DECEMBER 1955

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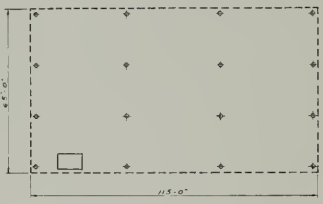

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Vol. 203 No. 3

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★

Modern Churches of Multiple Use

ST. ANDREWS
EPISCOPAL CHURCH
Fullerton, California

Among modern Church structures, designed to serve a multiple of community service, yet simple in design, is this Southern California Church.

For more complete story on today's Churches, see Page 11.

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EDITORIAL NOTES

Season's Greetings

THE HOLIDAY SEASON is a period of happiness and friendly sentiments throughout the world. It is a time when thoughts turn especially towards those who have participated in ARCHITECT & ENGINEER magazine activities during the past year.

The end of 1955 marks the completion of one of the most interesting periods in the life of our company and the Pacific Coast. Fifty years of continuous publication in the service of the architectural and engineering professions and the construction industry. We have reason to feel proud of our accomplishments, and at the same time are pleased to have been able to serve others.

Ahead of us lie still greater challenges with corresponding opportunities and responsibilities. Through cooperative efforts these future tasks will be converted into rewarding accomplishments.

A VERY MERRY CHRISTMAS and
A HAPPY NEW YEAR
TO YOU AND YOURS

The Management and Staff
ARCHITECT & ENGINEER Magazine

SAN JOAQUIN VALLEY BRANCH

ANGLO CALIFORNIA NATIONAL BANK

HANFORD, CALIFORNIA

WILLIAM HASTRUP, Architect

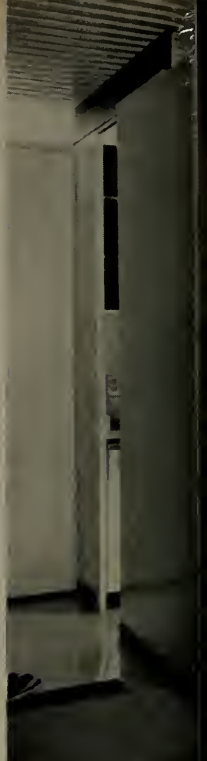
Artists conception of the beautiful, modern, new Anglo-California National Bank Building which will be constructed in Hanford, as recently announced by Paul E. Hoover, bank president.

The present office and banking facilities at 208 West Eighth street will be moved into the new building when completed sometime in mid 1956 according to present construction schedules.

Planned for construction on a corner building site in the center of the downtown business district, the new bank building will contain some 10,000 sq. ft. of floor space. The exterior treatment of the one-story structure will be carried out in reinforced concrete, with a decorative brick facing and attractive terrazzo base. There will be a main customer entrance opening onto Seventh street, while the architect has provided for a drive-in teller's window on the Irwin street side of the building, where liberal automobile parking and a planted area has been provided for the bank's customers. The rear entrance of the bank will open onto a large city-operated parking lot that is accessible from Eighth street.

The interior of the new Anglo offices will be of a modern decor with fluorescent lighting and air conditioning throughout. A mezzanine is planned for the rear portion of the building.

The building has been designed to completely house three separate divisions of Anglo Bank operations—the automobile contract and consumer loan departments and the general banking facilities. Since the first two continue to operate after banking hours, provision has been made to close off the general banking area from the other two departments after banking hours. A lunchroom and recreation area for employees also will be provided.



Custom steel homes today... steel sub-divisions tomorrow

Even the most cautious observers show surprise at the headway steel is making with designers, builders and the home-buying public. Until just recently, this creative use of steel centered in the custom home field. And accordingly, many architects and builders feel that it is the high-priced neighborhoods that offer steel its brightest future. But builders of multi-home developments say no! They also see steel as a new technique for building better homes at less cost.

One prominent California tract developer, Joseph Eichler, has swung into action with a small (1040 sq. ft.) prototype "house of steel." As yet no cost figures have been released by the builder. Outside authorities set the probable selling cost of the home (if it were one of a multi-home development) in the neighborhood of $13,000. However, the house is not for sale. The builder describes the home as an experiment to gain cost and production experience on the use of steel for mass-production building. The finished job is promising evidence that sub-divisions of steel are both practical and imminent.

TO GET EQUIVALENT STRENGTH from wood members, the architect would need 16" timbers to replace these lightweight 8" steel beams. Throughout the Eichler Home, steel beams and vertical columns produced light, graceful lines... oblivious to warping and checking.

SPEED AND EASE OF CONSTRUCTION are factor strongly favoring steel framework and roofing. Three work men needed only 2½ hours to erect the modular framewor and roof decking on the 5-room, 2-bath Eichler Home. Th home was designed to utilize stock steel parts.

STEEL FRAME ELIMINATES BEARING WALLS, leaving one big open area to be partitioned off with pre-built storage walls which can be rearranged according to the needs of a growing family or new owners.

The Public Speaks... pro and con

From the steel framework up, this experimental home attracted curious crowds. Such public interest gave the builder an idea: open the home for inspection, charge admission and deliver proceeds to The American Cancer Society. This was done and in two weeks' time, thousands visited the home.

What was the public's reaction to a house of steel? As was expected, opinion varied (it always does). Some tastes run contrary to the whole concept of modern home design. Typical of this group was the lady who complained "... these modern houses just don't look homey." There was concern about "... all that glass." And yes, someone even said, "Where'd we put Grandmother's picture in this place?"

The positive side of the ledger registered such comments as:
"These rooms look immense, yet the place is only 1040 square feet!"
"I'll bet the maintenance costs are lower with steel"
"...no termite worries with steel"
"...these cabinet walls really make the house something different"
"This place could really take a beating and still last forever!"
"...where can we buy something like this?"

Architects and Engineers: We expect to have additional information available on the use of steel in residential construction. If you're interested in receiving this, please send us your name and address and we will forward the material as it's available. Write: Columbia-Geneva Steel Div., 120 Montgomery St., San Francisco 6—Architects and Engineers Service.

Architect: Raphael S. Soriano, AIA
Steel specifications:
Ceiling beams—8" wide flange beam
Vertical columns—4"-H-13#

Sliding wall sash; all secondary framing, fences and garden structures are steel frame. Roof decking is 20-gauge steel sheet. The bulk of this steel came from the mills of The United States Steel Corporation.

tern homes of the future are now building with steel... **UNITED STATES STEEL**

NEWS and COMMENT ON ART

San Francisco's

M. H. deYOUNG MEMORIAL MUSEUM

Is Oldest On West Coast

With its 64-galleries, library, two garden courts, lecture hall and class room, the M. H. deYoung Memorial Museum, Golden Gate Park, is the largest and oldest municipal art museum in the West, with an annual attendance of nearly a million persons.

The museum's permanent collection of European and American art is housed in galleries surrounding a spacious central court adorned with four Gothic Flemish tapestries given by the William Randolph Hearst Foundation. Paintings, scultpure, stained glass windows, tapestries, furniture and decorative arts, also several original panel period rooms, illustrate the cultures of the Western world from the times of ancient Egypt, Greece and Rome till about 1850. This section recently augmented by additional galleries in a new wing constructed on the building's main axis has grown spectacularly within recent years. It contains, aside from very fine Medieval works, such masterpieces as "The Tribute Money" by Rubens, "St. John the Baptist" by El Greco, the marble sculpture of a reclining boy by Verrocchio and many other internationally acclaimed works.

Five rooms are devoted to gifts by Mr. and Mrs. Roscoe F. Oakes, mostly French 18th century art including outstanding pieces of furniture, tapestries, sculpture, and paintings by Boucher, Nattier and Greuze; and portraits by Rubens and Van Dyck.

The museum's permanent collection has recently been enriched by the Samuel H. Kress Collection of 39-paintings which include Spanish, Dutch, French and Italian masterpieces dating from the 14th through the 18th centuries and contains such immortal masters as Fra Angelico, Titian, El Greco, Pieter de Hooch and Goya.

Cultures of the Orient and the Pacific Basin are represented in galleries devoted to the art of China, Japan, Indo-China and Indonesia, the islands of the South Pacific, Pre-Columbian Central and South America and the North American Indians.

California's colorful history is the theme of a large section containing old paintings and prints of the City of San Francisco, reconstructions of authentic interiors, a costume collection, historical portraits, and other documents. Galleries displaying arms and armor and ship's models complete the collections in the west wing.

Ten galleries in the museum's east wing are devoted to loan exhibitions, each shown for about one month. These present not only a lively survey of contemporary art but also bring to San Francisco such outstanding exhibitions as "Art Treasures from the Vienna Collection," "Masterpieces from the Berlin Museums," and "Art Treasures from Japan."

An art reference library is open to the public and an education program of lectures and workshop courses is given free of charge for children and adults.

PORTLAND ART MUSEUM

Thomas C. Colt, Jr., director of the Portland Art Museum, S. W. Park and Madison, Portland, Oregon, announces the Seventh Annual Print Exhibition will continue through December 31.

Another special holiday exhibition will be a group of Paintings by Portland amateur painters, which will also be shown during December.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., has arranged a number of special exhibitions and events in conjunction with the holiday season.

Special Exhibitions will include: First Pacific Coast Bi-ennial Exhibition of Paintings and Watercolors, an assembly of 88 pictures by the Santa Barbara Museum of Art; the Bridges of San Francisco—Perceptive, a group of photographs by Fred Lyon; Printed Textiles Designed by Modern Masters. Textiles in display designed by Picasso, Miro, Leger, Chagall and Dufy, produced by D. B. Fuller Company of New York. Paintings by Allie Bargum Hyde, and Watercolors by Paula Palmer complete the showings.

The Achenbach Foundation for Graphic Arts will exhibit a group of Serigraphs by Sister Mary Corita, I.H.M.; and at the Public Library a group of religious Prints from The Immaculate Heart College.

Among special events is an Organ Recital every Saturday and Sunday at 3 p.m.; Saturday morning painting classes for children 6 years of age through 14, 10 o'clock.

SAN FRANCISCO MUSEUM OF ART

War Memorial Building, Civic Center. Currently showing the 19th Annual Drawing and Print Exhibition of the San Francisco Art Association, and a number of special Christmas and holiday's exhibits.

Portion of some 600 design and construction members view test demonstrations.

Test Demonstration Pretensioned Lightweight Concrete

BASALT ROCK COMPANY

Napa, California

Test demonstrations on Pretensioned lightweight concrete "double Tee" roof slabs of 40-50 ft. spans, "Double Tee" floor slabs of 30-ft. spans, composite box floor units with 40-ft. spans, composite box bridge units with 32-ft. spans, and tapered girders with 64-ft. spans, conducted as part of a complete test program underway at the Napa plant, were viewed by more than 600 members of the design and construction industry recently.

A. G. Streblow, company president, pointing out advantages of pretensioned lightweight concrete elements, stated "Here is a phase of construction of vital interest to everyone of us, because, although it is old in theory, it is new in application. Pretensioning and Postensioning are finally making themselves felt in the construction field and we believe both will substantially effect new concepts in future design."

Raymond E. Davis, consulting engineer and supervisor of the test program, discussed advantages of Success of the tests were largely the result of this high strength, low shrinkage aggregate.
expanded shale, rounded, sealed particle aggregate.

Test Results: Concrete in all members weighed 105 lbs. per cu. ft. which at time of release had strength of 3500 psi and at time of test, 4500 psi.

Test units were prestressed with high strength 7-wire strand having ultimate strength in excess of 240,000 psi. Strands were initially tensioned with calibrated hydraulic rams to 70% of ultimate strength. One test, a "Double Tee" roof slab, was loaded to 3 times design load. Then, because of excessive deflection (12-in. on 40-ft. span) and cracking (3/16-in. maximum) the test load was removed. The slab immediately recovered to 4½-in. deflection, something not possible in conventionally reinforced concrete.

During tests, all members were seen to recover completely at loads up to cracking. The design loads, maximum deflections were found to be 2/3 that allowed by the codes with some as low as 1/3. Cracking loads ranged from 170% to 250% of design loads.

Low Slump Mixes: All concrete was mixed in the Basalt Precast Plant which utilizes an open pan type mixer and produces higher strengths for a given cement content than conventional drum type mixers. All mixes were designed and controlled by a fully equipped research laboratory adjacent to the plant.

Facilities: The plant is currently operating a Universal pretensioning bed 27 ft. wide by 180 ft. long designed for a prestress force of 300 tons per lineal ft. width. The plant also has two 180 ft. long metal lined concrete forms for casting "Double Tee" sections. Plans call for additional facilities in the near future.

Checking deflection on a double tee floor slab—30 ft. span with 2-inch topping.

ARE MODERN SCHOOLS OBSOLETE WHEN BUILT?

Indiana State Department of Public Instruction Conducts Audio-Visual Conference

QUESTIONS MODERNITY OF MODERN SCHOOLS

"Are modern schools really modern?" asked State Superintendent of Public Instruction, Wilbur Young in his opening address to the Indiana State Conference on School Planning for Audio-Visual Education recently. He followed this question with the statement that it was the aim of the Indiana Department of Public Instruction to make sure that school buildings now being planned were designed to take advantage of all the modern teaching methods and equipment.

"The fact that Indiana is one of the first five states in the nation to hold a cooperative conference of this kind is a strong indication of the steady progress being made in our state to up-grade the quality of education which we are providing for our children.

"Our needs for schoolhouse construction are great and classrooms must be built to provide for these needs for a number of years. They must be built and equipped for the purpose of facilitating an educational program—one phase of which is an audio-visual program.

"The value of audio-visual education has been proven. Indiana has recognized that importance by recent actions of the General Commission on Education which were designed to encourage the establishment of a good audio-visual program in every one of our schools and to provide for the support of that program.

"We have had many questions concerning the design of the classroom in which audio-visual materials will be used. Much has been done by a study of these problems which has been made for our Department during this past year by educators, architects, superintendents of buildings and grounds, and leaders of industry. Indiana is proud of its leadership in such a cooperative study.

"We **still** need the answers to more questions. This means an opportunity as well as a serious responsibility to work together sharing our technical and professional understandings. We must be sure that tax dollars spent for these new schools will buy buildings which will provide the best possible educational facilities.

"The boys and girls of Indiana are its priceless heritage. We must work together to provide for them the classrooms in which they can most effectively become adapted for the new world," Young concluded.

His remarks before the meeting of 500 leading Indiana school architects, builders, superintendents and building and grounds officials were amplified and the conference summarized by Mr. P. A. Guy, Assistant State Superintendent of Public Instruction, in his concluding talk.

Architects' Specifications Published

The conference in the auditorium of the Emmerich Manual Training High School has drawn national interest because it is the first such conference to specify practical minimum requirements in architects' language for planning schools for audio-visual teaching. A file folder of these recommendations was given to the members of the conference and will be available in an American Institute of Architects' folder to all Indiana and out of state architects who request them, according to Mrs. Altha Sullivan, general chairman of the conference and Director, Division of Audio-Visual Education, Indiana Department of Public Instruction.

The all-day session was presented by twenty-four Indiana and national authorities on school planning, school equipment and audio-visual education. The program covered the subject of audio-visual education, classroom projection, daylight control and ventilation, artificial light, electrical specifications, acoustical treatment, central sound systems, maintenance, equipment storage, extra classroom areas and administration of audio-visual utilization.

BUILDING INDUSTRY CONFERENCE BOARD

ANNUAL AWARDS DINNER MEETING

Over three hundred members of the Architects, Engineers, Contractors, Material Producers and building industry gathered together recently in San Francisco, for the Annual Awards Dinner given by the Building Industry Conference Board in the Ballroom of the St. Francis Hotel.

The meeting was presided over by Joseph A. Carlson, Chairman of the Board and manager of Kraftile Company, San Francisco office, with Carl F. Wente, president of the California State Chamber of Commerce, the guest speaker, discussing the subject, "Problems of the State of California."

Arthur Brown, Jr., nationally known San Fran-

ARTHUR BROWN, JR.

Architect

cisco architect, was given the annual "Achievement Award," the presentation being made by Clarke E. Wayland, vice president of Western Asbestos Co. and chairman of the 1955 Awards Committee. Among the many large buildings designed by Mr. Brown is the Department of Labor and Interstate Commerce Commission Buildings in Washington, D.C., the Federal Office Building in San Francisco, San Francisco City Hall, War Memorial Building, Coit Tower Memorial and many others. He was Associate Architect of the Paama Pacific International Exposition of 1915 in San Francisco, and also a member of the Architectural Commission for the Chicago World's Fair of 1933; Chairman of the Architectural Commission of the Golden Gate International Exposition on Treasure Island, 1937-39; a member of the Board of Architectural Consultants, U. S. Treasury Department; and supervising Architect for the University of California in the construction of many of the University's finest buildings. Mr. Brown was also designer of the general plan of the Stanford University campus, the Hoover War Library there and many of the buildings at the University.

Born in Oakland, Brown holds many honors with the Academis des Beaux Arts, Institut de France. He is a member of the Pacific Union, Bohemian Club, Burlingame, Faculty and Century Club of New York.

The annual "Honorary Award" for 1955 was presented to I. Cleveland Steels, well known California dams and water projects designer, who for many years served as Engineer for the Pacific Gas & Electric Company. From 1944 to 1947 he served the company as Chief Engineer and in such capacity became internationally known for his successful building of many of the water dams and hydraulic projects for his company, as well as steam-electric and other properties. In 1951 he became Vice President and Chief Engineer, however he has now retired from the P. G. & E. and is acting as a Consulting Engineer.

I. CLEVELAND STEELS

Engineer

The "Achievements Awards" Dinner was inaugurated several years ago by the Building Industry Conference Board, representing a number of professional organizations and societies in the construction field, and has become one of the outstanding events of the year.

J. H. BAXTER CO. CONSOLIDATES OFFICES

To handle its ever increasing volume of business, the J. H. Baxter & Company, one of the West's largest producers of treated forest products, has moved into new and larger home offices in the equally new Equitable Life Assurance building at 120 Montgomery street, where they have leased half of the 22nd floor of the building.

The new facilities will give the firm an increase of 4,100 sq. ft. of office space over their old location at 200 Bush Street, San Francisco. The main sales office and all accounting and bookkeeping offices, formerly at different locations, are being consolidated in the new main office headquarters.

W. W. Jackson, sales manager who previously maintained offices in Portland, Oregon, has moved his offices to San Francisco and will direct all of the firm's sales activities throughout the western states from the new home offices.

January 1, 1956, will see a number of important personnel changes in the organization; C. A. Chadbourne will assume the duties of president of this 75-year-old Western firm. Alfred X. Baxter will become executive vice president, and A. M. Baxter and Gardner Pond will serve as vice presidents, while R. B. Mossman will assume the duties of secretary of the firm.

The J. H. Baxter & Company specializes in the pressure treating of forest products such as poles, pilings, lumber, ties and plywood and maintains extensive treating plants and storage yards at Alameda and Long Beach, California; and Eugene and The

(See Page 28)

WARREN WEBER, Architect

MODERN CHURCHES

SIMPLICITY OF DESIGN

Key to

MODERN CHURCHES

Of Multiple Use

By ARTHUR W. PRIAULX

Undoubtedly the most significant developments in church architecture in the United States today are the moves toward greater simplicity in design and greater functionalism.

Western architects who are familiar with church design trends in the country point out three principal factors in this movement away from the traditional styling and less functional structures which we have associated with our houses of worship for many centuries past. They include: (1) the impact of community demands on the church for the variety of functions; (2) increasing demand for more complex mechanical equipment to care for these added functions, and (3) local factors of geography, topography, climate and specific local trends in design.

This trend to simplicity is true in the design of the main church house, and in the adjoining and oftentimes connected buildings which house educational and social-recreational activities of the church.

It is interesting to learn from these same architects

COMMUNITY CONGREGATIONAL CHURCH

Oceanlake-Wecoma, Oregon

WARREN WEBER, Architect.

Rural parish church along Oregon beaches has striking lines, friendly theme and remarkable hollow spire of unusual grace.

Stained glass windows in towering spire shed warmth and cheer on chancel framed in cedar.

ENTRANCE to Oregon beach church (above), captures contemporary spirit without losing ony aspect of church life, as does interior (below). Warren Weber, Architect.

that about one-fourth of all churches being erected today in the greatest church building boom in history follow the so-called traditional style of architecture. Another fourth of the new structures are modern with contemporary styling throughout. The remaining half of these beautiful and attractive new buildings are a fine blending of the traditional and the contemporary in an altogether splendid form. These last combine the best of the two styles.

About our religion and our houses of worship we are inclined to be ultra-conservative, to avoid change as heretic, and in many cases to look upon any effort to tamper with religious tradition as sinful and undesirable. It is all the more remarkable, then, to witness the rather amazing acceptance by minister, laymen and church architects of the contemporary influence in design.

There are some Western architects who believe this breaking with the past in the basic matter of church design may in itself be exerting a strong influence in this period of religious reawakening of the people. They believe the subtle suggestion of the new design indicates that religion is as modern in appeal as any of the wonders of the twentieth century and that this

ST. MARK LUTHERAN CHURCH

North St. Paul, Minnesota

Ingemann & Bergstedt, Architects

Ease of construction one of many features of wooden arch.

idea is getting over to an ever-increasing number of former non-church goers through the medium of the attractive new church plants.

Three out of four of all new churches, regardless of basic architectural styling, utilize the wooden structural beams, arches and trusses built and shaped from glued-together boards of Douglas fir or similar wood. There is no question but that the great flexibility of this newest of engineering materials—glu-laminated timbers—has had a tremendous influence on church design in the past two decades. The architect has been given a wonderful new material in these man-made wooden timbers which open up a vast new range for his design ingenuity.

One architect said it was "not surprising" that church architects were pioneering in the use of man-shaped timbers and using them to advantage to develop a new style of church architecture. He points

FIRST LUTHERAN CHURCH . . . Torrence, California. Edward Dovid Davies, Architect.

CENTRAL LUTHERAN CHURCH, Portland. Belluschi and Skidmore, Owings & Merrill, Architects. (Above)

out that "throughout history church designers have set the style for changes in architecture". The Gothic style, with its vaunted ceilings and pointed arches, has been the most enduring and it too was developed during a period of great religious vitality. The noteworthy point about these timbered members is that they lend themselves as readily to duplicating a lovely traditional church building as for one of the most striking of the contemporary designs. Their great flexibility, their ease of erection, their low cost all recommend them.

Churches still look like churches, even the most advanced contemporary designs. In almost every instance, the spire and vaulted roof line is retained. For many centuries in church design we have and still do retain much of the warmth and beauty of wood and glass, with their accompanying changing patterns of light tracings and filterings.

Except in rare instances, decorations are no longer ornate. Instead, architects are using the texture, grain, natural wood coloring and beauty of wood to develop a sort of in-place sculptural effect. In many cases the ceilings of fir or west coast hemlock, or even occasionally of western red cedar are left exposed to give an added area of modified scultpure. Some of these woods are treated with new modern stains the

ST. JOHN EPISCOPAL CHURCH, Kirkland, Washington. Durham, Anderson & Freed, Architects. (Below) Beauty of structure features these churches.

better to blend with the stained glass windows to develop a particular color effect.

A California architect suggests that the reason he has gone over exclusively to the use of glu-laminated arches is that they offer everything desired in modern church framing; the rare beauty and patina possible only in fine wood, unbelieveable flexibility and adaptability for a limitless variety of architectural designs and forms, savings in functional construction, ease of maintenance and generations of permanence. The same architect observed that the glu-lamination industry has made great forward strides in recent years and were now able to construct almost any shape, truss, beam, arch and timber which the designer requires.

It is significant to note that even in the boldest of the new contemporary designs, churches still retain that mystery and dignity which we require of our houses of worship. They represent functionalism at its best.

There have been some wonderfully exciting churches designed by western architects in the past few years which have followed the contemporary theme with outstanding effect.

The Friendly Church of God at Eugene, designed by Architect John E. Stafford, is a striking example

ST. JOHN LUTHERAN CHURCH, Seattle. Durham, Anderson & Freed, Architects.

Sweeping arches (above) offset from outer walls, form fascinating pattern of shadows, while the Danish tower (below) is an outstanding feature of this Seattle church. The sweep of the shingle roof softens the lines of the attractive brick walls.

CROSS OF CHRIST LUTHERAN CHURCH
St. Louis Park, Minnesota
Paul E. Crosier, Architect.
Unique parish church retains none of the traditional style, is completely contemporary.

of what can be done in the modern trend. Although this church home is large, it has been made to appear most informal and inviting in its outer siding of boards-and-batten western red cedar. The spire has even been modernized. Built of western red cedar, it is effectively set out with an abstract free form collar. Wood texture has been used with great purpose throughout this very fine church building.

Another of the outstanding contemporary church structures in the northwest is the Central Lutheran Church of Portland, designed by Belluschi and Skidmore, Owings & Merrill. This remarkable structure (see Page 14) is most intriguing in its basic effect which has been achieved by unusual use of structural form and line. These is much of the traditional in this building, in the careful blending of brick and wood and the use of stained glass to exploit the characteristics of wood to full advantage. But, there is even more of the traditional form.

The fine little chapel of the Community Congregational Church constructed along the Oregon beaches at Wecoma-Occanlake and designed by Architect Warren Weber is an outstanding example of contemporary styling (see pages 10, 11, 12). There is none of the traditional about this building, but a completely new church style. It is adequate for the community, yet has a cottage coziness about it which immediately sets the pace of the structure whether viewed from any position outside or from the lovely and striking interior. Probably most effective feature of this fine chapel is the unusual lighting effect at the chancel which nestles in the open base of the spire. Stained, earth-colored glass windows on two sides of the spire send down a soft, warm light which shifts

TEMPLE METHODIST CHURCH, San Francisco. Alfred W. Johnson, Architect. Its steeple of attractive porcelain enamel, portrays a modern solution for an age old problem.

with the direction of the sun.

Another contemporary church with exceptional functional consideration is the Forks (Washington) Congregational Church (See Page 18 center). In this community of 2500 where 110 inches of rain a year is normal and protection from the rains are vital. Covered passages reach from the street to the narthex. It is possible to reach any portion of the church from the narthex, once under cover. The design concept of the building is based on the simple use of wood materials, and the dramatic use of natural light.

The sanctuary is formed by curving laminated fir arches which support a curved roof of 3x6 fir planking resting directly on the main support arches which form roof and walls of this church. The arches come down at the end of the pews forming side aisles which are lighted with continuous baffled window walls, letting in a soft, controlled light. The window wall is composed of strips of amber glass set alternately between vertical grained 2x10 inch fir boards that form both the interior and exterior finish. The plastic skylight casts light down on a battened cedar wall, supporting a wooden cross, which motif is repeated on the exterior facade.

This church was designed by the architectural firm of Durham, Anderson & Freed, Seattle. This same firm has designed several other outstanding churches

PILGRIM LUTHERAN CHURCH
Santa Monica, California
William E. Foster, Architect

LAKE BURIN PRESBYTERIAN CHURCH, John Graham & Co., Architects. Large bell will replace loud speakers in tower—cedar walls alternate with glass and brick to create a lovely residential church.

in the northern Washington region.

The new church of the St. John's Episcopal parish at Kirkland, Washington, is one of their fine creations (see Page 14). A simple structural frame of rigid jointed and laminated fir arches spanning 38 feet has been finished in natural tones of stain to form the worship center for 250 parishoners. The exposed fir decking of 3x6 fir tongue-and-groove planking has been finished in the same tones. The organ screen was built of 2x4 inch fir framing lumber stained in deep brown, supplemented in value by the lighter tones of the organ cloth which is natural burlap. This first unit houses sanctuary and guild hall.

Another excellent design of the Durham, Anderson and Freed firm is Seattle's new St. John's Lutheran Church (see Page 15). This Danish congregation decided on retaining most of the traditional church form, but, since it is to be a community church, this

FRIENDLY CHURCH OF GOD

Eugene, Oregon (Top)

John E. Stafford, Architect.

The traditional church spire is in contemporary style.

CONGREGATIONAL CHURCH

Forks, Washington

Durham, Anderson & Freed, Architects.

Low-cost church (left) ingeniously solves the problem of light and weather.

ST. LUKE LUTHERAN CHURCH

Manhattan, Kansas.

Romey & Himes, Architects.

This modern church emphasizes the now popular wood arches and purlins.

fact has been taken into consideration in the fine church building.

Construction is generally of frame, using laminated fir trusses with 3x6 tongue-and-groove fir decking with hand-split resawn cedar shakes and brick veneer walls.

Natural lighting in the nave is accomplished with continuous plastic relights under the eaves and a plastic skylight running down the roof over the altar. Small windows in stained glass are formed in a pattern back of the latar on the chancel and combined with small symbolic scenes placed in the amber glass of the sidewalls.

Very modern is the Lake Burien Presbyterian Church designed by architects John Graham and Company. This neighborhood church (see Page 17, bottom) set down in a residential area has been styled to fit into its surroundings without any jarring note. There is much good detail in this church and much attention to finish of the native materials to get excellent contrasts and shadings. The glu-laminated arches and purlins of Douglas fir have been walnut stained to blend with the redwood suspended cross. Chancel walls and ceiling are of Douglas fir 2x6 in a pattern to serve as organ screen. This has been done in driftwood gray to blend with birch furniture in the chancel.

Another feature of this church is the use of copper

IMMANUEL LUTHERAN CHURCH

Lawrence, Kansas.

Ramey & Himes, Architects.

New way to achieve vaulted height in auditorium in this distinctive creation.

(See Page 30)

ST. BENEDICT CHURCH

Seattle, Washington

John Maloney, Architect.

Demonstrates the wide versatility of man-made wood arches designed to cover a wide area, post free.

Forty foot glass wall of living room faces West and famous ski slopes.

VACATION HOUSE

MRS. DAVID ROSENTHAL, Owner
Sun Valley, Idaho

HUMMEL, HUMMEL & JONES, Architects

F. E. PATTERSON,
General Contractor

MAUNCEY'S of BOISE
Interior Decoration

Flagstone steps lead from carport to main entrance door, protected by roof overhang. For privacy from road, windows are high.

CABINET separating Living Room from Entry Behind folding doors in the divider cabinet are concealed radio, phonograph, record storage and bar. The entry is beyond.

Exterior materials extend in door (see above photo). The entry with its view to the mountains beyond, provides circulation to to all parts of the house.

Like the prow of a ship, the living room of this vaeation house points to Baldy Mountain and its famous ski runs. The floor-to-ceiling windows give the house a sweeping view of the entire valley. The beginner slopes of Dollar Mountain rise from the terrace, which joins to the living room by sliding glass doors. To the right, and on slightly higher ground, are seen Sun Valley Lodge and the Alpine Village of the Inn. This large room, with its panorama of the valley, is the center of the entire house.

Upon entering the house from the covered flagstone walk which connects to the carport, there is a view of the living room and the valley and mountains beyond. On one side of the entry is a wing containing two guest rooms, each with its own dressing room and bath. On the other side is a door to the service area. The entry, on a higher level than the

Living Room—from entry steps, with sliding glass doors to terrace at far end. Photo at right.

Window walls and roof-high ceilings add visual space.

living room, is separated by a cabinet of Japanese Ash which houses radio, phonograph, record storage, and a bar.

The owner's bedroom on the south is reached from the far end of the living room. This large sunny room, with its own fireplace, doubles as a private retreat. It is a combination bed-sitting room and has connecting baths and dressing areas.

The kitchen, utility room, and maid's room and bath complete the house. The kitchen, designed for efficiency, like a ship's galley, connects to one end of the living room. The kitchen has a built-in barbeque with copper hood and a small dining area.

Throughout the house the utmost thought was

Ample and convenient storage (photo below) is a hallmark af this house. Detail of one of the guest room dressing areas.

Kitchen Showing Barbeque

Old brick and copper are combined here to form a cooking top and charcoal pit with electric spits.

Master dressing room ►

given to ease of maintenance, comfort and relaxation, which fit the informal life at Sun Valley. Because of the brilliant winter sun and the reflection from the snow, Solex glass is used throughout to eliminate glare. In addition, all windows are glazed with double insulating glass to protect against the sudden temperature drop after the sun goes down. The house is heated with hot water by means of baseboard radiation and is divided into four zones. The living room zone is supplemented by an air system to provide fresh air, cooling, and a quick pickup for early morning and late evening when the sun rays are gone. To further the ease of maintenance and to eliminate the necessity of snow removal, all roof surfaces are designed to carry a snow load which can attain a depth of two to three feet in winter. Electric heat cables are installed on all eaves to prevent icing.

The exterior is faced with warm gray sandstone and hand-split vertical cedar siding, and the roof is covered with heavy cedar shakes. All is color-coordinated to blend the house into the natural setting of the valley. The stone of the exterior is repeated again in the flagstone entry floor and the large fireplace wall in the living room. The sloped ceilings, covered with kerfed flooring and supported on glu-laminated beams, extend through the glass walls to form a wide protective eave. Ceilings and beams are stained brownish-pink to complement the valley colors and the warm textures of the outside.

Summer or winter, this Vacation House, planned for the extremes of either season, becomes a home for year around living.

Plan

Ceiling in Master Dressing room (top photo) acts as lighting fixtures when fluorescent tubes concealed above are switched on. Corrugated plastic which shields light, transmits an even glow without glare or shadows.

◄ Bedroom in Guest wing.

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OREGON WOMEN'S ARCHITECTURAL LEAGUE

Mrs. W. P. Hagestad, Home Tour Chairman, announces the Third Annual Home Tour scheduled for early this spring, will include a remodeled home along with a variety of Portland's homes in a wide price range.

Purpose of the tours is to acquaint the public with well-designed homes; to show what architectural services can do for the client and to raise funds for a scholarship which is awarded annually to a promising senior agricultural student at the University of Oregon.

NOTHERN CALIFORNIA CHAPTER

For the first time in Chapter history an organized program was developed during the past summer to obtain vacation jobs for architectural students, and the committee in charge is currently evaluating the program to determine plans for next summer.

Mario Corbett, member, is currently at Yale University, as a guest critic in design.

WASHINGTON STATE CHAPTER

"The Architect and the Speculative Builder" was the subject of the December meeting held in the Roosevelt Hotel, Seattle. Three speakers: Dan Narodick of Hebb & Narodick, Seattle, a recent past president of the Seattle Master Builders Association; A. C. Goodwin of Goodwin Homes, Seattle; and George Bell of Bell & Valdez, Bellevue, discussed the subject

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Producers' Council — Northern California Chapter (See Special Page)

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in considerable detail.

New Members: Arthur Herrington, Corporate, transferred from Montana; Donald W. Bogard, H. Leed Carmean, Donald J. Foote, Allen D. Moses, Charles B. Ogden, and William A. Ritzenthaler, Junior Associates; Donald L. Johnson, Associate.

WASHINGTON LANDSCAPE ARCHITECTS

Donald M. Winslow of Bellevue, has been elected president of the Washington Society of Landscape Architects. Other officers include: J. David Jensen, Seattle, vice-president; and Raymond A. Brauner, Edmonds, secretary.

SOUTHERN CALIFORNIA CHAPTER

A tour of the Mormon Temple at Santa Monica Blvd. and Manning, followed by dinner at the Hollywood Athletic Club, where consideration of the 1956 National American Institute of Architects convention to be held in Los Angeles in May, was the principal business constituted at the December meeting.

COAST VALLEYS CHAPTER

"College Training plus Office Experience plus State Board Examinations Make an Architect," was the subject of a panel discussion at a recent meeting in Los Gatos. Norman K. Blanchard of Blanchard & Maher, Architects, San Francisco and member of the State Board of Architectural Examiners, and a member of the A.I.A. National Committee on Awards and Scholarships, served as moderator. Participants in the panel included George T. Rockrise, Walt Althausen, and George Downs.

OREGON CHAPTER

C. Girard Davidson, Portland attorney, official delegate to the Italo-American City and Regional Planning and Housing Seminar in Italy, was the main speaker at a recent meeting of the Chapter.

Davidson discussed "Regional Resource Planning by the Federal Government,," as well as the general aspects of city planning in the Portland area.

PASADENA CHAPTER

The Pasadena Architectural Club and the Pasadena Chapter, AIA, held a joint Christmas meeting and program in Gwinn's Magnolia Room, Pasadena, early this month.

Among special features was the "Hi-Lighters" from Pasadena City College.

CALIFORNIA COUNCIL OF ARCHITECTS

Santa Barbara was the scene of an all day meeting early this month by the Architectural Practices committee, George Allison, Los Angeles, to provide the broadest possible base for revision of the Council's "Schedule of Recommended Fees", now under consideration.

Architects from all sections of California were in attendance.

WITH THE ENGINEERS

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STRUCTURAL ENGINEERS ASSOCIATION NOTHERN CALIFORNIA

Walter L. Dickey, chief civil and structural engineer for the power division of Bechtel Corpn, was elected president of the SEANC at the annual meeting early this month, succeeding Michael V. Pregnoff.

Verne Bender, regional manager of Nelson Stud Welding; George E. Kennedy, engineering representative, and Allen Bosley, field engineer presented a film "The Curtain Wall Story" featuring the erection of an Air Force hangar wall and the application of insulation and corrugated material.

New Members: Peter H. Grayum, Jack H. McMinn, and William A. Penny.

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AMERICAN SOCIETY OF MILITARY ENGINEERS—San Francisco

"Specialized Personnel and the National Security" was the subject of a discussion at a recent meeting of the Society held in the Presidio Officers Club. Colonel A. E. McCollom, Assistant Division Engineer of the South Pacific Division, was the principal speaker.

Forty-eight new members were announced at the meeting.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Twenty-five years of Changing School Design" was the subject of the December meeting held in the Rodger Young Auditorium, Los Angeles.

Principal speaker was Herbert J. Powell, Architect, F.A.I.A., and member of the architectural firm of Smith, Powell & Morgridge, who discussed the changing demands in schoolhouse planning and construction. He emphasized the current requirements and forecast the anticipated volume of school construction that will be required over the next several years.

New Members: Associates—J. P. Anderson, Lawrence J. Breinin, Paul N. Greenfield, Farrel T. Miles, and James W. Wisda, Jr.; Walter Babchuk and Hernam R. Reuter, Junior Members; Alfred G. Burchett, Allied Member; and R. D. Woodward, Affiliate Member.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco

Observance of the Fiftieth anniversary meeting on December 20th, was highlighted by a discussion on the

Barbara Counties Branch. Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

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Society of American Military
Engineers—San Francisco Post
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subject "Issues Involved in a National Highway Program," led by Prof. Harmer T. Davis, member of the ASCE Task Committee on the National Highway Program, director of the Institute of Transportation and Traffic Engineering, and Chairman of the Division of Civil Engineering at the University of California.

Announcement was made that the annual "Engineer's Week" would be observed February 19-25, 1956. Represented on the Bay Area Engineers' Week will be R. F. Wildman, G. S. Harman, R. M. Duncan, F. F. Mautz, and R. M. Barbey.

1955 WELLINGTON PRIZE WINNERS ANNOUNCED

Winners of the 1955 Arthur M. Wellington Prize for the best paper on the subject, "Live Loadings for Long-Span Highway Bridges," were Raymond J. Ivy, A.M. ASCE, supervising bridge engineer and Stewart Mitchell, M. ASCE, retired principal bridge engineer, State Department of Highways, Sacramento; Prof. T. Y. Lin, M. ASCE, and C. F. Scheffey, J.M. ACSE, of the Engineering Materials Laboratory at the University of California; and N. C. Raab, M. ASCE, chief, and V. J. Richey, A.M. ASCE, senior bridge engineer of the San Francisco Bay Toll Crossings.

U.C.L.A. ANNOUNCES SPRING ENGINEERING-MANAGEMENT COURSE

The University of California at Los Angeles announces that the Engineering and Management Course will be offered for the second time next January 23 through February 2, 1956.

The course provides a unique opportunity for line and staff personnel to obtain training in a wide variety of subjects in a two-week period of time. Twenty subjects offered will enable a participant to tailor a program to fit his own company's specific needs.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Announcement has been made that the 1956 annual convention will be held in Reno, Nevada, October 11-13, with the Central Section as hosts.

J. S. Barrish has been named General Convention Chairman, and has assured "an unusual and unique" convention.

IMPORTANT NOTICE!

As of December 1, the new

F. H. A. MPR Revision No. 55 requires:

"55-lb smooth surface roll roofing with edges lapped and sealed, or other materials providing equivalent durability and water vapor resistance under concrete slab on ground."

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FEMINEERS HOLD CHRISTMAS PARTY

The Femineers, representing wives of members of the ASCE and SEAC in the Bay Area and Northern California, observed their annual Christmas Luncheon at the Orinda Country Club, December 21st.

Mrs. K. (Billie) McKesson
Femineer President

Feature of the meeting was an exhibit and contest of "unusual Christmas tree ornaments", with prizes being awarded to the member creating, or obtaining, the most unusual tree decoration.

Following the luncheon the ornaments were donated to the children's ward in one of the Bay Area hospitals.

In keeping with the Yuletide season, gifts were exchanged by members.

PUGET SOUND CHAPTER AMERICAN SOCIETY FOR METALS

Reported by EDWARD MURRAY
Boeing Airplane Company

Gib Moudry, Chief Metallurgist of Harvey Aluminum Company of Los Angeles, presented a lecture recently entitled "Extrusion of Metals".

Moudry's opening remark was "extruding is the best way of fabricating metals especially where particular metallurigcal properties and particularly close tolerance configurations are desired." In shaping a part, the extrusion process works the metal from the billet to the finished extrusion. It works the metal more thoroughly and uniformly than any other method.

The process of extruding is relatively new. It is mainly used for aluminum but is also successful with copper base alloys, high-strength steels, and stainless steels.

Extruding has the highest efficiency of any major fabricating process. One of the chief advantages of extruding over forging is the elimination of draft allowances. Saving critical materials is another factor. The aircraft industry is utilizing high-strength steel extrusions that were formerly made of aluminum. Either cast or wrought stock can be used for the basic material without altering the properties of the finished product.

There is considerable difference in the extruding practice of aluminum or steel. Although aluminum is softer and not as strong, it is more difficult to extrude. Aluminum is extruded at about five feet per minute at a temperature of 750°F. Steel is extruded at 1000 feet per minute at 2250°F. Die pressures are 3000 psi for steel and 4000 psi for aluminum. Speed is essential for steel in order to reduce the amount of scale formed.

CONFERENCE ON CONSTRUCTION OPERATIONS IN LOS ANGELES

Under the leadership of L. M. K. Boelter, Dean of Engineering at the University of California, Los Angeles, and his assistant, C. Martin Duke, with the aid of a distinguished advisory committee of engineers, educators and construction industry leaders, the University is sponsoring a National Conference on Construction Operations.

Such subjects as Present Practice on Planning and Control of Construction Operations; Investigation of the Potentialities for Progress in the Field of Construction Operation, and Exploring the Possible Application of Proven Industrial Engineering Techniques, such as Time and Motion Studies, Operational Analysis, and Automation are planned for discussion.

The Conference will be held on the University campus, January 27-28, 1956.

ARCHITECTURAL FIRM EXPANDS

Robert E. Dillon, Howard E. Westfall, Paul Y. Wong, and Florence Owens Le Conte have become associated in the partnership of Schmidts & Hardman, Architects, 1320 University Avenue, Berkeley, California, according to a recent announcement.

The new partnership has been formed in the interest of providing greater service for clients and will be known in the future as: Schmidts, Hardman & Wong, Architects.

J. H. BAXTER CO.

(From Page 9)

Dalles, Oregon. Principal sales offices are maintained in Los Angeles and San Francisco, Portland and Eugene, Oregon, and Omaha, Nebraska.

The company pressure treats both round and sawn forest products and maintains the largest standard stocks of pressure treated material in the West. Baxter also pressure treats wood products on special order at the centralized treatment plants, and maintains equipment and facilities to treat products in transit when desired.

Baxco pressure treated forest products serve a wide clientele including railroads, utility companies, builders and architects of industrial, commercial and residential buildings; barns, poultry houses, fences; mine timbering needs; and for highways, bridges, stadium seating, marine docks and piling, and wherever it is necessary to protect wood from rot and termites.

PHOTO CREDITS: *Front Cover, Summerhell Roof Structures, also Page 13 (bottom), 17, 18; Northwest Photographic Illustrators, Page 10, 11, 12; Rilco Laminated Products, Page 13 (top), 18 (bottom), 19 (top), 31; West Coast Lumbermen's Association, Page 14 (top), 16 (top), 18 (center); Kenneth S. Brown, Page 14 (bottom), 15; Hainlin Studio, Page 16 (bottom); Roger Dudley, Page 17 (bottom); Photo Art Commercial Studios, Page 18 (top); Kaminske, Page 19 (bottom); Hummel, Hummel & Jones, Architects, Page 20, 21, 22, 23; Moulin Studio, Page 3; Basalt Rock Co., Page 7; George F. Penny's Hartsook Studio, Page 9.*

AGC ELECTS POLLOCK PRESIDENT FOR 1956

Gordon Pollock of Sacramento was elected president of the Northern California Associated General Contractors at their December meeting, succeeding Ernest L. Clements of Centerville, who becomes a member of the Advisory Board.

Other officers elected included Felix H. Siri, Piombo Construction Company of San Francisco, vice-president; Milt Simpson of Ball & Simpson, Berkeley, Treasurer; and manager Frank W. Calaghan, secretary.

MEMORIAL GIFT FOR ENGINEERS

The Structural Engineers Association of Northern California was presented with a motion picture camera and projector from Mrs. Edna Adrian, in memory of her late husband William Adrian, a past president of the association and prominent in engineering activities throughout the world.

US STEEL MOVES PUBLIC RELATIONS

The Public Relations activities of the Western District of the United States Steel Corpn., have been moved into new and larger quarters at 120 Montgomery Street, San Francisco, according to a recent announcement by the company.

Offices were formerly located at 25 Beale Street.

NEW WING FOR PRUDENTIAL

One of the largest building projects in the Los Angeles area is the new $2,000,000 addition to the Prudential Insurance Co's western home office building on Wilshire Blvd.

The addition to the 10-story building will add 50% to the office space used by the company, and will be done in matching colors and materials to the present building.

Welton Becket & Associates are the architects.

COUNTY JAIL BUILDING

The architectural firm of Ernst & Lloyd of Stockton is completing drawings for construction of a County Jail building at the Honor Farm near French Camp, San Joaquin county, to include administration facilities, drunk and vagrant tanks, and other quarters.

Architect John C. Lloyd reports the building will be of 1-story, Type I, reinforced concrete construction and will cost approximately $230,000.

BUILDING CONTRACTORS PLAN INDUSTRIES CENTER

John E. Meskell, president of the Building Contractors Association of California, announced his organization has been authorized to construct a complete new Construction Industries Center at a proposed cost of $5,000,000 in the Los Angeles area.

Site selection and building plans will go forward at once.

The permanent exhibition will serve to acquaint the general public with the newest products available for use in new construction and home remodeling.

ARCHITECT SELECTED

The architectural firm of Warnecke & Warnecke, Oakland, has been commissioned by the Board of Regents of the University of California, Berkeley, to draw plans for construction of a new Physical Science and Mathematical Statistics unit building on the U. C. campus in Berkeley.

SITE PLANNER JOINS ENGINEERING FIRM

Oswald S. Geiger, licensed California land surveyor, has joined the Anchorage Engineering Company staff.

The firm, located in Culver City, specializes in tract design, and general property planning.

HOSPITAL ADDITION

Architect John W. Bomberger of Modesto is preparing drawings for construction of a 50-bed addition to the Memorial Hospital of Stanislaus County.

The new addition will be of 1-story, reinforced concrete construction and will cost an estimated $350,000.

LOS ANGELES ARCHITECT DESIGNS EASTERN GARAGE

The new Mellon Park Square underground parking project recently completed in the heart of the downtown business section of Pittsburgh, Pa, was designed by the Los Angeles architectural firm of Stiles & Robert Clements.

The six-level underground garage beneath a public park, is believed to be the deepest facility of its kind.

Smartly designed, extraordinarily convenient is this *entirely new* HAWS Semi-recessed Fountain that takes up little space in corridor or room and has drinking fountain head and operating lever handle accessibly located opposite one another on the top platform. An access panel in wall is NOT required for this fountain and all fittings are accessible from under bowl.

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MODERN CHURCHES OF MULTIPLE USE

(From Page 19)

about the baptismal font. Copper legs support the table. An interesting effect is the copper repousse face with decorations done with ancient art of hammering copper from back of plate.

Architect William E. Foster of Los Angeles has created an interesting church in the traditional theme at Santa Monica in the Pilgrim Lutheran Church (see Page 17, top). Before glu-laminated arches were available, he states, roof trusses of solid timbers were used through the centuries, but were expensive. Now that laminated wood arches are available, he states, we find them more satisfactory and less costly. Mr. Foster said these man-made timber members are very applicable to design problems encountered in designing Gothic church interiors.

Pasadena architect Edwin Westberg made excellent use of the laminated arch when he designed the First Methodist Church of San Gabriel (see Page 30). This is an arch-braced type and this was used because it seemed to fit this job especially well and it helped give interest to the immense roof expanse. Architect Westberg says that he has found the glu-laminated arches give more opportunity for diversification in design and also save in the cost of construction. All exposed wood members above the floor line—arches, purlins and ceiling—were sandblasted and overglazed to preserve its character.

The churches of Architect John W. Maloney of Seattle include some of the most interesting designs in the northwest. An example of his vigor of design is to be found in the St. Benedict's Church and Rectory of Seattle (see Page 19, bottom). Intended to seat 750 people, the nave is approximately 145 by 74 feet. The huge roof section is supported by massive glued laminated wood beams which have a stained finish. The rectory, at the rear of the church, is approximately 82 by 39 feet, two stories and part basement. A bridge connects the second floor of the rectory with the sacristies in the church.

Not all church congregations are affluent, so the basic concept of design of the First Lutheran Church of Torrance, California (see Page 13), was controlled to a large degree by available funds when Architect Edward Davies of Pasadena went to work. Mr. Davies found that the welded-truss or glu-lam wooden truss type of construction would offer the best in economy and load carrying ability more than any other type of heavy timber truss. His special economy of design had to meet the aesthetic requirements as well and he found that the flow of line from the floor up to the high point was very easily adaptable to the interior design theme of the chancel and main auditorium. In addition to the advantages of getting thrift as well as clean lines, Mr. Davies found that the two inch tongue-and-groove type roofing was very easily nailed to the laminated trusses and made it easy to provide the proper earthquake-diaphragm required in this southern California area. Another feature of the

FIRST METHODIST CHURCH

San Gabriel, California

Quintin-Westberg, Architects.

Retains traditional form while using the most modern materials available to develop the theme.

welded wood truss which Architect Davies admires is the flexibility of design possible in these built-up arches. They can be narrow at the bottom, thickened at the curve and tapered and cambered at the peak.

A most remarkable church design came from the drawing board of Architect Paul E. Crossier of Minneapolis, Minnesota, in his conception of the Cross of Christ Lutheran Church of St. Louis Park, Minnesota (see Page 16, top). Simply designed, it is most striking in appearance. Glu-laminated beams extended from concrete anchors to V-formed roofline. Brick

ZION LUTHERAN CHURCH, Hopkins, Minnesota. Lang & Rangland, Architects.

walls are inset and the lower portion of the beams are exposed. The narthex is a solid glass wall. This is a charming structure which is identified as a house of worship, although of extreme contemporary theme.

Architects Lang and Raugland, of Minneapolis, created an economical but beautiful church for the Zion Lutheran parish at Hopkins, Minnesota (see Page 31). Using glu-laminated arches, they said they could have them tailor-made to fint the spirit and mood of the design. They said of the laminated timbers that they allow complete freedom of design, so that the architect doesn't have to modify his thinking to fit the material used. They find that they can get strength, beauty and symmetry without having big and cumbersome forms. They also like the pleasant, comfortable and warm effect of wood for ecclesiastical structures. Another factor is the low cost of erection of these pre-formed, man-made wooden members.

A most unusual church is the Immanuel Lutheran of Lawrence, Kansas, designed by Ramey and Himes

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of Wichita (see page 19, top). A high, vaulted main auditorium is supported by boomerang type arches of great beauty and grace. They blend well with the half brick lower walls and the exposed walls of wood above.

Undoubtedly one of the reasons why the contemporary styling has become so popular is the simple matter of competition. When one church in a community is built in the fresh, new styles and when the neighboring church congregations see what can be done in departure from conventional and traditional forms of the past, it is fairly easy to understand why the new trend in design has met with such striking success.

The current boom in church construction, probably the greatest in the history of our country, has opened up for the progressive-minded architect a field for his work which is unparalleled in opportunity. For one thing, churches are seen often, are admired by the parishoners and appreciated by them when they are as beautiful and functional as the present styling permits. Architects have an opportunity to show their work to advantage. Maybe that is why the church designer of the past was able to set the style for other architecture of his time and for following generations.

However, the architect of our times is blessed with much more freedom than his predecessor of centuries ago. For the first time since churches were first developed to their massive form, the architect has in the laminated arches, trusses and beams virtually a new engineering materials. He is relased from the limitations of the material of his forebearers and is offered the limitless opportunity which stems from this freedom.

Probably as noteworthy about current church design trends as any other single point is the effective manner in which most of the architects are getting results with texture, line and detail of structural material. Few churches today are encumbered with the highly decorative detail which some of the famous old churches claim and which is part of their charm, dignity and beauty. Today, the architect depends more on simplicity for effect and for this generation, accustomed to streamlined structures at home and in business, it seems a natural way of life.

In studying the trends in church design throughout the country, it seems to this writer that western architects are a bit more daring in their willingness to explore every possibility for the use of contemporary styling in their church designs. Some of the most individual and impressive structures of the west are these products from western designing boards.

We are inclined to the belief that another decade will see an even more rapid acceptance of contemporary styling in our church structures. Architects have had a taste of freedom and we suspect they like it.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

LAND USES IN AMERICAN CITIES. By Harland Bartholomew. Harvard University Press, Cambridge, Mass. Price $6.50.

Great and even fundamental changes have crowded successively upon American cities since 1932 . . . cities have experienced an economic depression combined with a sustained period of retarded growth, a World War with a concomitant industrial boom, and an unprecedented increase in land area cost.

The book represents twenty years of study and research in some 53 central cities, 33 satellite communities, and 11 complete urban areas. Social and economic changes of cities are translated into terms of land use, which can be easily handled by the city planner, the urban economist, the sociologist, the geographer, or the general student of urbanism.

BUILDING PLANNING AND DESIGN STANDARDS. By Harold R. Sleeper. John Wiley & Sons, Inc., 440 4th Ave., New York 16. Price $12.00.

The publication of this book provides a wealth of comprehensive information covering architecture, engineering, and building practice today. It is entirely new and supplies in one volume information for: programming, making of schematic and preliminary drawings, and assists in establishing areas and cubage for estimating for 23 basic building types—from motels to churches. It also offers a wealth of data and details useful in schools and office drafting rooms.

Material is drawn from bulletins, catalogs, periodicals, and books and is presented graphically for easy reading.

DESIGN OF PRESSED CONCRETE STRUCTURES. By T. Y. Lin. John Wiley & Sons, Inc., 440 4th Ave., New York 16. Price $11.50.

This comprehensive work covers all phases of prestressed concrete structures, emphasizing American methods and conditions. It begins with the materials and procedures and continues on through loss of prestress, design for flexure, shear, bond, composite sections, continuous spans, prestressed columns, and tanks; concluding with a compact discussion of economics, fire and corrosion resistance, impact, and fatigue strength.

Simplicity marks the presentation, and formulas, tables and graphical methods are so introduced that both preliminary and final design can be made with ease. About 60 examples, each dealing with a specific point concerning the design of prestressed concrete, are included. Cost is also considered, and prestressed lift slabs and pre-tensioning products are described. The author is currently Professor of Civil Engineering at the University of California, Berkeley, where he has taught for the past ten years. In 1953-54 he was awarded the Fulbright award for advanced research on prestressed concrete in Europe.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Fans for business and commercial exhaust. Two-color, illustrated catalog describes Model G Ventura Fans for business and commercial exhaust applications; lists performance data of cfm at various static pressures; fan rpm, motor rpm, quietness rating and maximum net weight for 25 different direct drive units; also recommended time for complete air changes for various establishments—bakeries, bowling alleys, laboratories, laundries, restaurant dining rooms and kitchens, stores and theatres. Installation drawings. Free, write DEPT-A&E, American Blower Corpn, Detroit 23, Mich.

Service entrance equipment. New manual gives valuable information for architects, contractors, and engineers on a wide range of service entrance equipment, safety switches, and lighting distribution panel boards for homes, multiple dwelling units, and commercial buildings; contains selection, application, and installation data on fuse panels, service entrance equipment, general purpose and special switches, and panel boards; ratings and dimensions are tabulated, products pictured are fully described, including construction specifications.

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Continuous plastic sewer lining. New illustrated brochure describes high polymer vinyl resin sheet which is impervious to hydrogen sulphide and other sewer gases, acids, alkalis and salts; photos show installations; complete information on composition, physical and chemical properties and method of incorporating the lining in pre-cast and cast-in-place concrete sewer pipe and structures. Brochure available, write DEPT-A&E, Amercoat Corp., 4809 Firestone Blvd., South Gate, California.

Distinctive roof applications—exclusively yours with Red Cedar Shingles. A new two-color pamphlet (A.I.A. No. 19-dl) describes use of Red Cedar shingles in residential construction; illustrations show varied types of shingles and their application to obtain new style and attractive roofs. Write for copy to DEPT-A&E, Red Cedar Shingle Bureau, 5510 White Bldg., Seattle 1, Washington.

Stainless fastener data book. New 2-color, 52-page booklet; thumb-indexed for easy reference; includes illustration, thread and size specifications; availability in a variety of corrosion resistant metals to fortify basic fastening devices (screws, bolts, nuts, washers, rivets, etc.); also includes engineering data. Free copy, write DEPT-A&E, Allmetal Screw Products Co., Inc., 821 Stewart Ave., Garden City, Long Island, N.Y.

Brick and tile index, 1956-57. A new 41-page catalog giving exact sizes, colors, textures, ASTM specifications and manufacturers of all standard manufactured units in Northern California; designed to be a source of information for architects and engineers. Free copy, write DEPT-A&E, Clay Brick & Tile Association, 55 New Montgomery St., San Francisco 5.

Automatic emergency lighting units. New catalog describes equipment designed to provide instant, automatic emergency lighting protection whenever regular source of power fails; lights, fire alarms, public address systems, exits, telephone switchboards, control rooms—includes photographs, drawings, and schedules of recommendations. Free copy, write DEPT-A&E, Electric Cord Co., 195 William St., New York 36, N.Y.

Construction and industrial sealants. New bulletin describes use of presstite sealing compounds in construction of the Equitable Life Building in San Francisco; illustrated on-the-job installations, cross-sectional drawings. Copy available, write DEPT-A&E, Presstite Engineering Co., 3798 Chouteau Ave., St. Louis 10, Mo.

Heavy duty vibration mountings. New catalog describing steel spring vibration mountings; includes construction detail, methods of damping excursion, control of sway and thrust; gives load capacities and dimension tables, illustrations of typical installations and engineering services are also described. Write DEPT-A&E, T. R. Finn & Co., Inc., 200 Central Ave., Hawthorne, New Jersey.

Aluminum foil insulation. New data booklet (A.I.A. File No. 37-C-3) designed as reference manual of reflective house insulation on Alfol Aluminum Foil; contains more than 75 charts, photos and drawings; describes installation techniques, authentic cost study data, heat factors, causes and cures of moisture condensation, and exposed ceiling installations. Answers virtually every question that might arise on the subject of reflective insulation. Copy available, write DEPT-A&E, Reflectal Corp., 310 S. Michigan Ave., Chicago 4, Ill.

Electronic air cleaning equipment. New 2-color brochure is a case history of air cleaning in the Rockford Memorial Hospital at Rockford, Ill.; points out that clean air for entire building originally specified; benefits of electronically cleaned air to allergy patients, and control of germs, bacteria and viruses. Free copy, write DEPT-A&E, Arion, Inc., 1000 Island Ave., McKees Rocks, Pa.

Coil dehumidifiers. Twenty-page, 2-color illustrated catalog describes new central station type sprayed coil dehumidifiers; 10-page section of application data, design and construction, and arrangement of related equipment; gives specifications as useful guide to architects, engineers, and other preparing specifications. Free copy available, write DEPT-A&E, American Blower Corp., Detroit 32, Mich.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

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Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 per bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%

Trinity White	1 to 100 sacks, $3.50 sack
Medusa White	warehouse or del.; $11.40
Calaveras White	bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .21
6x8x16-inches, each	.24	.26
8x8x16-inches, each	.28	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	---	.64

Aggregates—Haydite or Basalite

⅜-inch to ¾-inch, per cu. yd	$7.75
¾-inch to 1½-inch, per cu. yd	7.75
No. 6 to 0-inch, per cu. yd	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	¾x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
⅝ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390.00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
⅛ in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
¼ in. Heat Absorbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
¼ in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
¼ in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3½") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr., 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard $ .75
Three-coat work	per yard 1.00
Cold water painting	per yard 25c
Whitewashing	per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Paintars—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—¾"—30c per sq. yd.
⅜"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ¾" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00

Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)

Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)

Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)

CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)

Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)

CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)

Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)

GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)

Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)

GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)

ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.

PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)

THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)

FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)

IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)

Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)

MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)

Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)

Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)

W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)

PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.

SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.

UTILITY APPLIANCE CORP. *(2)

Electric Heaters

WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating

THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760

PACIFIC COAST AGGREGATES, INC. *(11)

SISALKRAFT COMPANY *(9)

WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors

HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles

LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(9b)

LUMBER MANUFACTURING COMPANY *(18)

MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815

PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint

W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim

PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors

PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio

THE SCOTT COMPANY *(17)

HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341

CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations

GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows

DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890

MICHEL & PFEFFER IRON WORKS, INC. *(13)

PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors

DETROIT STEEL PRODUCTS COMPANY

Skylights

DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733

HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767

JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717

REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building

SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)

HERRICK IRON WORKS *(33)

SAN JOSE STEEL CO. *(33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800

GLADDING, McMEAN & CO. *(3)

KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses

Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber

J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161

J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525

DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718

CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440

MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516

E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579

PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697

ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh

PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	1½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½% ¼%PROM				

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

OFFICE BLDG., San Rafael, Marin County. California Pacific Title Insurance Company, owner. 1-story, Type III, concrete block and frame construction; 6,000 sq. ft. floor area — $119,300. ARCHITECT: Hass & Kouie, San Francisco. GENERAL CONTRACTOR: Stegge Development Company, Vallejo.

CHURCH & SUNDAY SCHOOL, Santa Clara. Church of Valley Congregational, Santa Clara, owner. 1-story, frame and stucco, concrete floors, wood exterior, radiant heating, rigid asbestos shingle roof, 8000 sq. ft. floor area—$162,400. ARCHITECT: Kingsford Jones, Menlo Park. GENERAL CONTRACTOR: Oscar W. Meyer, San Jose.

SENIOR HIGH SCHOOL ADD'N, Las Palmas, North Sacramento. Grant Union High School District, Del Paso Heights, owner. Comprises 8 classrooms, girls' gymnasium and shop buildings; frame and stucco, reinforced concrete and steel construction — $382,660. ARCHITECT: Starks & Jozen, Sacramento. GENERAL CONTRACTOR: Charles F. Unger, Sacramento.

SWIMMING POOL, Roseville High School, Placer County. Roseville Joint Union High School District, Roseville, owner. Reinforced concrete and frame and stucco toilet rooms — $92,740. ARCHITECT: Gordon I. Stafford, Sacramento. GENERAL CONTRACTOR: Dakan Engineering Co., Alhambra.

CHURCH, Rodeo, Contra Costa County. St. Thomas Episcopal Church, Rodeo, owner. Frame construction, concrete floors, wood exterior — $30,000. ARCHITECT: Arnold & Francis Constable, Sausalito. GENERAL CONTRACTOR: E. H. Peterson & Son, Richmond.

TELEPHONE BLDG. ADD'N, Huntington Park, Los Angeles County. Pacific Tel. & Tel., Los Angeles, owner. Construction of a 2nd story to existing telephone exchange building, reinforced concrete construction, built-up roofing, metal sash, slab and asphalt tile floors, electrical work, plumbing, toilets, interior plaster, acoustical work; 34,000 sq. ft. of area. ARCHITECT: Parkinson, Powelson, Briney, Bernard & Woodford, Los Angeles. GENERAL CONTRACTOR: Beyer & Abrahamson, Los Angeles.

TELEPHONE BLDG., Tustin, Orange County. Pacific Tel. & Tel., Los Angeles, owner. Reinforced concrete construction, built-up roofing, concrete slab and asphalt tile floors, acoustical work, metal sash, plastering, ceramic tile work, electrical, air conditioning, plumbing, site grading; 9200 sq. ft. floor area. ARCHITECT: Henry Chas. Burge (Burge & Roach), La Canada. GENERAL CONTRACTOR: B. L. Metcalf Co., Orange.

SCHOOL FOR RETARDED CHILDREN, San Jose, Santa Clara County. County of Santa Clara, San Jose, owner. Frame and stucco constructed building at the Hope School for Mentally Retarded Children; 7 classrooms, multi-purpose room, kitchen, toilet rooms; concrete floors and asphalt tile — $246,846. ARCHITECT: Ralph Wyckoff, San Jose. GENERAL CONTRACTOR: Harrod & Williams, Sunnyvale.

COUNTY COURT HOUSE & CITY HALL, Crescent City, Del Norte County. County of Del Norte, Crescent City, owner. 1-story frame and stucco, structural steel "H" columns and "I" beams, wood exterior—$407,000. ARCHITECT: William M. Van Fleet, Eureka. GENERAL CONTRACTOR: H. Barnhart, Medford, Oregon.

HIGH SCHOOL ADD'N, Hilmar, Merced County. Hilmar Unified School District, Hilmar, owner. Frame and stucco construction; facilities for offices, library, 13 classrooms, library and study hall, shop building—$244,300. ARCHITECT: Robert C. Kaestner, Visalia. GENERAL CONTRACTOR: Trewhitt-Shields Co., Fresno.

OFFICE BLDG., San Jose, Santa Clara County. Futura Investors, Inc., owner. 3-story, frame and concrete block construction: air conditioning, elevator—$250,000. ARCHITECT: Hollis Logue, San Jose. GENERAL CONTRACTOR: Fisci Bros., San Jose.

CHURCH & PAROCHIAL SCHOOL, East Whittier, Los Angeles County. St. Bruno Parish, East Whittier, owner. Frame and stucco church and a frame and stucco school; composition and gravel roofing, concrete slab and asphalt tile floors, steel sash, brick veneer, plumbing, electrical, forced air heating, evaporative cooling in church, acoustical plaster and tile, oak block flooring in church; church will provide facilities for 1000 persons; school will contain 12,000 sq. ft. of floor area. ARCHITECT: Barker & Ott, Los Angeles. GENERAL CONTRACTOR: Nicholas Smith & Sons, Anaheim.

LIBRARY, Bakersfield, Kern County. Kern County Board of Supervisors, Bakersfield, owner. New library building to be built in the Civic Center, 2-story and basement, steel frame and concrete roof, forced air heating, architectural concrete, asphalt paving, ceramic veneer, insulation, plate glass, aluminum sash, terrazzo, waterproofing, aluminum sliding doors, acoustic tile, cork tile, metal toilet stalls, heating from existing central plant; 56,000 sq. ft. floor space — $8,000,000. ARCHITECT: Whitney Biggar, Bakersfield. GENERAL CONTRACTOR: Guy E. Hall, Bakersfield.

ELEMENTARY SCHOOL, Cottonwood, Tehama County. Evergreen Union Elementary School District, Cottonwood, owner. Facilities include offices, 3 classrooms, lunch room, kitchen, toilet rooms; frame and stucco construction—$68,725. ARCHITECT: Clayton Kantz, Redding. GENERAL CONTRACTOR: Karl Hattenhauer, Red Bluff.

COLD STORAGE BLDG., Merced. Filice & Perrelli Canning Co., Richmond, owner. 1-story, reinforced concrete tilt-up construction, wood roof, fiberglass insulation, 20,000 sq. ft.—$134,000. STRUCTURAL ENGINEER: Simpson & Stratta, San Francisco. GENERAL CONTRACTOR: Indenco Inc., Oakland.

OFFICE BLDGS., Eureka, Humboldt County. Humboldt Land Title Company, owner. 1-story concrete block and frame construction—$90,000 (2 buildings). ARCHITECT: William M. Van Fleet, Eureka. GENERAL CONTRACTOR: Glover Constn. Co., Santa Rosa.

COMMUNITY CENTER & SWIMMING POOL, Chico, Butte County. Chico Recreation & Park District, Chico, owner. Reinforced concrete and frame construction; facilities for deck, dressing rooms, offices; fencing and site work; pool of reinforced concrete—$97,408. ARCHITECT: Lawrence G. Thomsen, Chico. GENERAL CONTRACTOR: Crocker & Tandy, Richmond.

FACTORY & WAREHOUSE, El Monte, Los Angeles County. Gregg Iron Foundry, El Monte, owner. 1-story, rigid steel frame and corrugated iron exterior and roof, steel trusses, plastic skylights, rotary roof ventilators, steel sash, metal sliding doors, concrete slab floor, compressor room, toilets and showers; 40 x 140 ft. ENGINEER: F. E. MacDonald, Jr., San Gabriel. GENERAL CONTRACTOR: Apex Steel Corp., Ltd., Los Angeles.

EXHIBIT BUILDINGS, Fairgrounds, Alameda County. County of Alameda, Oakland, owner. 1-story, part 2-story, colored concrete block construction, 10 laminated wood arches, some structural steel, 100 x 200 ft.—$223,000. ARCHITECT: Irwin M. Johnson, Oakland. GENERAL CONTRACTOR: James A. Hutzler, Oakland.

FLOWER MART, San Francisco. San Francisco Flower Growers Association, San Francisco, owner. Restaurant and cocktail lounge, 1-story, reinforced concrete tilt-up construction; wood roof, concrete block, 3 buildings containing 165,000 sq. ft. of floor area — $840,000. ARCHITECT: Mario Ciampi, San Francisco. GENERAL CONTRACTOR: Cahill Constn. Co., San Francisco.

HIGH SCHOOL ADD'N, Sanger, Fresno County. Sanger Union High School District, Sanger, owner. New 2-story classroom building, reconstruct auditorium; add new 1-story classroom building with cafeteria, toilet rooms; reinforced concrete

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construction, steel wall sash panels, concrete floor slab over steel bar joists—$4,932. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Harris Const. Co., Fresno.

FACTORY, Burbank, Los Angeles County. Dewey C. Burroughs, Burbank, owner. Concrete block factory building, composition roof, concrete slab floor, frame and plaster partitions, steel sash, overhead doors, rotary roof vents, sliding doors, tapered steel girders, toilets, paint spray booth; 64 x 108 ft. ENGINEER: H. L. Standefer, Consulting Engineer, Studio City.

BANK, Walnut Creek, Contra Costa County. Anglo California National Bank, San Francisco, owner. 1-story reinforced concrete and frame construction, 7,000 sq. ft. floor area—$175,000. PLANS: Allan Scott Watts. GENERAL CONTRACTOR: Stolte, Inc., Oakland.

CENTRAL STORES BLDG., Livermore, Alameda County. U.S. Atomic Energy Commission, Oakland, owner. 1-story structural steel frame, precast tilt-up concrete walls, reinforced concrete floors, automatic sprinkling system, electrical work, heating, ventilating, mechanical work; 120 x 200 ft.—$154,709. GENERAL CONTRACTOR: Harolds General Contractors, San Francisco.

SHOPPING CENTER, Tarzana, Los Angeles County. Richard T. Moss, Encino, owner. Brick and steel "Thriftmart" and service shops, drug store and variety store, composition roofing, tapered steel girders, concrete slab, acoustic tile ceiling, cork insulation, air conditioning, electrical, plumbing, paved parking area for customer cars; 10,000 sq. ft. area. ARCHITECT: W. Harry Hillier, Beverly Hills.

TRACTOR SALES & SERVICE, Watsonville, Santa Clara County. Pringle-Gerlach Co., Watsonville, owner. 1-story reinforced concrete tilt-up walls, laminated beams, wood roof, concrete slab floor; frame and corrugated steel shop building 40 x 60 ft. (Sales office 100 x 120 ft.) ARCHITECT: Clark & Beuttler, San Francisco. GENERAL CONTRACTOR: T. H. Rosewall, Watsonville.

SHOP BLDG., Barstow, San Bernardino County. Barstow Union High School District, Barstow, owner. Addition to the existing shop building—$74,500. ARCHITECT: Kistner, Wright & Wright, Los Angeles. GENERAL CONTRACTOR: C. E. De Witt, San Fernando.

BOYS RANCH, William J. James, Madrone, Santa Clara County. County of Santa Clara, San Jose, owner. Administration and shop classrooms, recreation building, laundry, residence; structural steel frame, wood roof, concrete block and concrete floors, radiant heating — $204,000. ARCHITECT: Allan M. Walter Associates, San Jose. GENERAL CONTRACTOR: George Bianchi, San Jose.

TELEPHONE BLDG., Tucson, Arizona. Mountain States Telephone & Telegraph Company, Tucson, owner. Reinforced concrete, 6724 sq. ft. building—$162,344. ARCHITECT: Place & Place, Tucson, Arizona. GENERAL CONTRACTOR: J. A. Binns, Tucson.

VETERANS' MEMORIAL, Spreckels, Monterey County. Spreckels Veterans District, Salinas, owner. 1-story frame and stucco building to contain facilities for clubrooms, auditorium, banquet room, kitchen, meeting rooms, offices, caretaker's apartment—$120,267. ARCHITECT: Butner, Holm, Waterman, Salinas. GENERAL CONTRACTOR: Tombleson & Huck, Salinas.

ELEMENTARY SCHOOL, Strawberry Lane, Sacramento. South Sacramento Elementary School District, Sacramento, owner. Addition of class room and multi-purpose facilities to present school; frame and stucco construction — $69,987. ARCHITECT: Rickey & Brooks, Sacramento. GENERAL CONTRACTOR: H. W. Robertson, Inc., Sacramento.

LIBRARY REMODEL, San Rafael, Marin County. City of San Rafael, owner. Interior remodel of existing library building. ARCHITECT: Gromme, Priestly & Mulvin, San Rafael. GENERAL CONTRACTOR: Herrero Bros., San Francisco.

NEW CITY HALL, Concord, Contra Costa County. City of Concord, Concord, owner. 1-story concrete block and frame construction; 8,200 sq. ft. floor area—$169,500. CONSULTING ENGINEER: Halak Akol, Berkeley. GENERAL CONTRACTOR: Greuner Const., Oakland.

FIELD HOUSE & PLAYGROUND, San Francisco, City & County of San Francisco, owner. 1-Story, part basement, reinforced concrete and frame construction, laminated wood beams, wood roof, composition roofing, steel and wood sash, maple and asphalt tile floors, ceramic tile, heating; 18,600 sq. ft. floor area — $429,000. ARCHITECT: Donald Beach Kirby, San Francisco. GENERAL CONTRACTOR: James I. Barnes Constn Co., Redwood City.

FIRE HOUSE, Planada, Merced county. County of Merced, Merced, owner. 1-Story concrete block and frame construction fire house 32x56 ft. GENERAL CONTRACTOR: Ted Bernard, Merced.

PRINTING PLANT ADD'N, Carson City, Nevada. State of Nevada, Carson City, owner. 1-Story, cinder block walls, structural steel roof trusses — $32,821. ARCHITECT: Howard H. Brandis, Reno, Nevada. GENERAL CONTRACTOR: Frank Capriotte, Reno.

CHURCH: San Francisco. Zion Lutheran Church, San Francisco, owner. Reinforced concrete construction, wood roof trusses, wood roof — $133,766. ARCHITECT: Arnold & Francis Constable, Sausalito. GENERAL CONTRACTOR: Questad Constn Co, Oakland.

TRANSFORMER FACTORY, Palo Alto, Santa Clara county. Palo Alto Engineering Co, Palo Alto, owner. 1-Story structural steel frame and stucco construction, some aluminum; 12,000 sq. ft. floor area — $100,000. ARCHITECT: Paul J. Huston, Palo Alto. GENERAL CONTRACTOR: Wells P. Goodenough, Palo Alto.

ARMORY, Tulare, Tulare county. State of California, Sacramento, owner. Reinforced concrete footing, concrete floors, reinforced concrete walls with rigid steel frame, steel sash, wood roof, composition roofing, mechanical and electrical work; 11,000 sq. ft. floor area — $101,777. ARCHITECT: Anson Boyd, California State Architect, Sacramento. GENERAL CONTRACTOR, Midstate Constn Co, Fresno.

COUNTY OFFICE BLDG, Hayward, Alameda county. County of Alameda, Oakland, owner. 1 & 2-story structural steel frame construction, metal lath and plaster, stucco interior, asphalt tile floors; 100,000 sq. ft. floor area — $1,526,000. ARCHITECT: Edward D. Cerruti, Oakland. GENERAL CONTRACTOR: Indenco Constn Inc., Oakland.

OFFICE BLDG, Monterey. California State Automobile Association, San Francisco, owner. 1-Story, frame and adobe veneer construction, open trusses ceiling, shake roof — $35,377. ARCHITECT: Robert R. Jones, Carmel. GENERAL CONTRACTOR: Harold C. Geyer, Monterey.

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IN THE NEWS

KAWNEER COMPANY PROMOTES DIEHL

Robert B. Diehl, a native of Kenosha, Wisconsin, has been appointed works manager of the Niles, Michigan, and Lexington, Kentucky, plants of Kawneer Company's Architectural Products Division, according to an announcement by Irving R. Reely, administrative vice president of Kawneer and general manager of the division.

He succeeds W. J. Woodruff who has been promoted to general manager of the Appliance Products Division with headquarters in Cynthiana, Kentucky.

ARCHITECT SELECTED

Architect Robert Stanton of Carmel has been selected by the Petaluma Elementary School District, Petaluma, California, to design a new Elementary School and make additions to existing school buildings in the district.

Estimated cost of the work is $1,100,000. Funds will become available through sale of school district bonds, which have been approved.

NEW "ACE" GYPSUM WALL BOARD NAILS

The new "ACE" Gypsum Wall Board (Dry Wall) Nails are designed and manufactured to meet the physical and technical requirements of the Technical Service Division of the Gypsum Association of Chicago, their members, distributors and contractors.

Manufactured in a variety of sizes, flat sinker head, sharp, plain finish; with definite and pronounced Fetter Rings as illustrated, to insure greatest holding power. Complete information from Frank L. Robinson Co., 1429 Latham Square Bldg., Oakland 12, California.

ARCHITECT SERVES AS ADVISOR

Welton Becket, F.A.I.A., architect of Los Angeles, was reappointed by Secretary of the Air Force Donald A. Quarles to serve as consultant for the Air Force Academy now being constructed near Colorado Springs, Colorado.

SF ENGINEER DISTRICT EXTENDED INTO NEVADA

Extension of the boundaries of the San Francisco Engineer District to include Lincoln and Clark counties Nevada, has been recently announced by Colonel J. A. Graf of the Army Engineers.

All military construction work in and around the Las Vegas area will now be conducted by the San Francisco office, including Nellis Air Force Base, Lake Mead and various other army air force establishments.

Several millions of dollars new construction is planned for this area in the fiscal years 1956 and 1957.

MODERN FREIGHT TERMINAL FOR LA

One of the largest, most modern freight terminals in the Unitel States is planned for Los Angeles by the Pacific Intermountain Express Company, according to an announcement by A. K. Humphries, firm president.

The terminal will occupy 18 acres of a 35-acre site in the Simon's Industrial Tract of the Los Angeles central manufacturing district.

Albert C. Martin and Associates, architects and engineers of Los Angeles, have designed the buildings and facilities.

BOXBOARD PAPER MILL PLANNED

The California Container Corp'n, Santa Clara, will soon construct a new boxboard paper mill near the city of Santa Clara at an estimated cost of $6,300,000.

Albert C. Martin and Associates of Los Angeles, are architects for the project.

NEW SCHOOL AUDITORIUM

The architectural firm of Cantin, Cantin & Capell of San Francisco, is completing plans for construction of a new Auditorium building for the Pittsburg High School, Contra Costa county.

The new facilities to the present High School will provide for 2,000 persons, and will constitute a Type 1, reinforced concrete and structural steel building. Estimated cost of the project is $1,250,000.

NEW MOTEL FOR RENO

Architect Russell Mills of Reno, Nevada, is completing drawings for construction of the Town House Motel in Reno.

The project will comprise a 2-story, brick, cinder-block, and frame building with complete facilities for 84-motel units. Estimated cost of the work is $450,000.

SCHOOL DISTRICT BONDS APPROVED

Voters of the Maricopa Unified School

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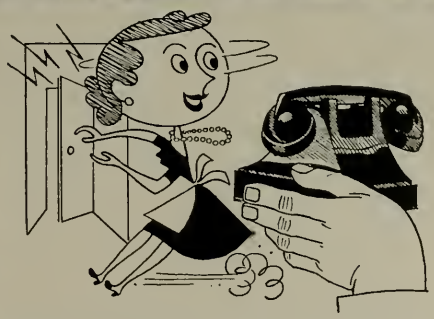

How to take the "run" out of running a home

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District, Kern county, recently approved sale of $1,350,000 of special school bonds with funds to be used in the construction of school facilities for the District.

Architects Wright, Metcalf & Parsons of Bakersfield designed the new schools, including classrooms for elementary and high school students who use multiple-use buildings for music, homemaking, gymnasium, industrial arts, art, and a proposed auditorium.

DRAFT-MASTER'S NEW DRAFTING TABLE

The newest feature of the Stacor line of Draft-Master drafting tables is a three receptacle electrical outlet on all models; designed to accommodate lamp, eraser and pencil sharpener to have them handy to the draftsman.

Using a single adjacent outlet, instead of the usual tangle of cords, this is the latest of many convenience features which Stacor has incorporated in their drafting tables. Further details available from Stacor Equipmnt Co., 768-778 E. New York Ave., Brooklyn 3, N. Y.

MEDICAL DENTAL

Architect Earl John Taylor of Sacramento, is completing drawings for construction of a 12-suite Medical-Dental office building to be built near Sacramento.

The building will be 1-story, frame and masonry veneer and asbestos board construction and will contain 10,000 sq.ft. of floor area.

ARCHITECT SELECTED

The architectural firm of Rosse & Callister of San Francisco has been commissioned by the Portola Elementary School District of Woodside, San Mateo county, to design a 4-classroom addition to the Portola Elementary School.

A recent special election provided $150,000 in school bonds for the work.

NEW BANK AND STORE

The architectural firm of Wurster, Bernardi & Emmons of San Francisco, has completed drawings for construction of a new bank and store building to be built in Sausalito for the Bank of America.

The new bank building will be 1-story and mezzanine, and of structural steel and frame construction.

ARCHITECT PLANS TV SHOW

Victor Gruen, A.I.A. architect, Los Angeles, served as architectural and planning consultant for a TV show called "1976" and produced by NBC in Hollywood.

Included in the program was reference to city planning and other factors of "modern living".

CHURCH PLANNED NORTH HOLLYWOOD

Architect J. Earl Trudeau of Alhambra, has been commissioned by the St. Charles Catholic Church of North Hollywood, to draw plans and specifications for the construction of a new Church building in North Hollywood.

The building will be of reinforced concrete and gunite construction, mission tile roof, concrete slab, marble, terrazzo, and will provide facilities for seating of 1000 persons.

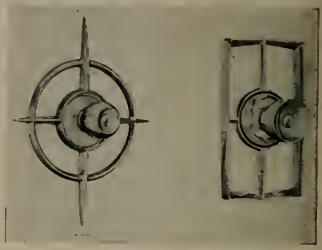
ARCHITECT MICHELSEN JOINS LOUBET & GLYNN

Architect H. M. Michelsen recently became associated with the firm of Loubet & Glynn, Architect, San Francisco.

Offices of the firm are located at 400 Montgomery Street.

NEW LOCK CONCEPT DESIGNED BY SCHLAGE

A new concept in lock background design for entrance and interior doors has been announced with introduction of the "Manhattan" and "Continental" by Schlage.



Designed with open back, the escutcheons allow architects and interior decorators wider latitude in planning door treatment and make possible use of an infinite variety of background colors, materials and textures. Interior and exterior door decor can now be accomplished with lock backgrounds of wallpaper, glass cloth, pigskin, patterned metal or paint. Complete data available from Schlage Lock Company, 2201 Bayshore Blvd., San Francisco.

HIGH SCHOOL GYMNASIUM

Architect David H. Horn of Oakland is completing drawings for construction of a Gymnasium Building for the Patterson High School, Stanislaus county.

The new building will be of structural

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steel frame with reinforced concrete and will have tile and maple floors. Estimated cost is $250,000.

ENGINEER COMPLETES ISRAELI PROJECT

Arthur J. Power, Denver, Colorado, reclamation and irrigation engineer, has returned following a 2-year stay in Israel where he served as an advisor on modern irrigation methods.

Power was borrowed from the U.S. Reclamation Bureau office in Denver by the International Co-Operation Administration to do Point Four work in Israel.

ARCHITECT NAMED TO ENGINEERING FIRM

John Phillip Joseph has been named designer and project architect of the William J. Moran Company, Los Angeles Consulting Engineers and General Contractors, according to a recent announcement.

Joseph was formerly with the architectural firm of Austin, Field & Fry, Architects and Engineers, Los Angeles.

BANK BUILDING

Architect Robert N. Eddy of Bakersfield is completing plans for construction of a 1-story reinforced concrete bank building to be built in Delano for the First Western Bank & Trust Company of San Francisco.

Work will include insulation and air conditioning and will cost an estimated $125,000.

NEW SENIOR SCHOOL

Architect Clayton Kantz of Redding is completing drawings for construction of a 35,000 sq. ft. Senior Elementary School near Redding for the Enterprise Elementary School District.

The building will be of light steel frame construction.

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PENNEY STORE FOR RENO

Architect Ralph B. Berger of Reno, Nevada, is completing drawings for construction of a new J. C. Penney store to be built in Reno.

The new building will be 3 stories, with basement, Type 1 construction and will be 100x140 feet.

SAGE HOTEL, SAN JOSE

Architect Bruce E. Heiser of San Francisco has completed drawings for the Sage Hotel Company of San Jose, for construction of a 2-story, concrete and frame, and frame and stucco hotel building with complete facilities for 207 rooms and baths.

Site of the new Hotel is on Bayshore Highway and costs are estimated at $2,000,000.

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...welling of San Francisco, are completing drawings for construction of a 100 student residence hall and library at the St. Mary's College High School in Oakland.

Construction will be reinforced concrete and brick exterior, concrete and linoleum floors, tile roof. Estimated cost $250,000.

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SCHOOL BONDS APPROVED

Voters of the Hayward Elementary School District, Hayward, approved issuance of $900,000 and acceptance of $2,500,000 in State Aid, for construction of two new Elementary Schools and building additions to 13 existing school buildings.

BRINCKMAN STEEL APPOINTED AGENT

The Brinckman Steel & Supply Company of North Sacramento has been appointed distributor for Penmetal Lightsteel Structural Sections, according to Al Brinckman, president.

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